Migration, Social Capital and HIV/AIDS:
A study of Rajasthani migrants in Mumbai and Ahmedabad

Devender Singh

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Dedicated to

My parents

Shrimati Dharm Kaur
Shri Anand Singh

Abstract

This study explored the relationship of migrants' sociodemographic characteristics and social capital with HIV risk to contribute to our understanding of migration and HIV dynamics. The study was undertaken among Rajasthani migrants of age 18 and above in Mumbai and Ahmedabad. The data were collected from 1598 migrants through survey method and 73 migrants through qualitative methods from January to June 2007. Having casual partners, sex with a sex worker and no or inconsistent condom use with sex worker were used as the measures for HIV risk.

There were significant differences among migrants. Mumbai had more people in the higher age category, married and with longer duration of migration. Ahmedabad had more migrants who were younger, unmarried, with regular jobs and more workdays per month. Migrants in Mumbai and Ahmedabad differed in the nature and content of social capital. Bonding and linking social capital were higher in Ahmedabad than Mumbai while bridging social capital was higher in Mumbai than Ahmedabad.

Migrants engaged in high risk behaviour in Mumbai and Ahmedabad. Ahmedabad had more people reporting having casual partners (251; 31.6 percent vs. 134; 16.7 percent), sex with a sex worker (138; 17.4 percent vs. 80; 10 percent) and irregular or no condom use (96; 12.1 percent vs. 27; 3.4 percent) than Mumbai. Migrants at destination place had five times higher chances of having sex with a sex worker than villages. The nature of job, steady or fluctuating income and mode of salary receipt were the common significant

variables in both Mumbai and Ahmedabad. Social capital was associated with the three HIV risk measures in overall, domain and component forms; however, the relationship was complex. HIV risk was mediated by 'buddy' and 'daddy' culture in Ahmedabad and Mumbai, respectively. Presence of senior community members in Mumbai lowered the risk in Mumbai while membership in buddy networks led to higher risk for migrants in Ahmedabad.

In conclusion, migrant was not a homogenous category. The differences in sociodemographic characteristics and social capital informed the differential HIV risk in migrants. It is important to understand migrants' lived experiences to plan effective HIV prevention programs.

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CHAPTER 1

Introduction

Background

India, with a population of more than 1 billion, has 2.5 to 3.1 million estimated cases of HIV (NACO, 2006). The majority of these cases are in the economically productive and reproductive age-group. Typically, certain subpopulations are considered to be at high risk for HIV infection. These subpopulations include commercial sex workers, injecting drug users and men having sex with men. However, there is recent evidence that HIV is no longer restricted only to high-risk population groups and urban areas; it has diffused into the general population and rural areas (NACO, 2006). Based on 2006 estimates, the National AIDS Control Organization (NACO) in India has categorized 156 districts as high prevalence districts. Out of 156 districts, 34 districts are in low prevalence states. Migration is an important factor that connects the epidemics, urban to rural and high risk populations to the general population.

Evidence from around the world suggests a strong relationship between migration and HIV/AIDS (Kane et al., 1993; Quinn, 1994; Decosas et al., 1995; Decosas and Adrien, 1997; Brockerhoff and Biddlecom, 1999; Chardin, 1999; UNAIDS, 2001a; UNAIDS, 2001b; UNDP, 2001; Brummer, 2002; Lurie et al., 2003). The predominant interest in migration and HIV studies has been with the spatial distribution of HIV prevalence rates and AIDS cases and the manner in which migration is contributing to

the spread of the virus (Decosas et al. 1995; UNAIDS and IOM, 1998; Lurie, 2003; Soskolne and Shtarkshall, 2002). How migration affects migrants' vulnerability to overall poorer health in general and risk for HIV in particular when compared with the non-migrant population at the place of origin of migration or the host population at the destination place has not been studied in depth, and the dynamic and complex relationships between migration and HIV/AIDS are not well understood (Brockerhoff and Biddlecom, 1999; Soskolne and Shtarkshall, 2002). In the migration and HIV literature, it is commonplace to find statements suggesting that migration is related to heightened HIV risk, and migration, but does not lead directly to HIV infection *per se*; rather, it causes conditions which heighten HIV risk in migrants. However, it is evident that not all migrants are at equal risk for HIV. Why some migrants have a higher risk for HIV than others and what conditions migration causes/creates that lead to heightened risk for migrants have not been adequately studied so far at the global level; even less so in India which has huge internal migration as well as an HIV epidemic.

All migration cannot be captured by a single category or description. Different types of migration may have many stages and correspondingly may have a different nature. To understand migrants' differential HIV risk and the related conditions that lead to heightened risk in migrants, one needs to understand the lived experiences of migrants. Differences in socio-demographic characteristics, living and working conditions and social capital lead to different outcomes for migrants including differential HIV risk.

A field based study was undertaken among Rajasthani migrants in Kherwadi, Mumbai and Piplaz, Ahmedabad to understand how migration affects HIV risk and why some migrants within the same community have higher risk than the rest. Rajasthani migrants represent a typical migrant in India. Their sociodemographic characteristics, living and working conditions match with the profiles of migrants provided in the literature on migration in India. This study sought to understand the migration related conditions and explore their relations with HIV risk. The 'migration related conditions' that this study explored included sociodemographic characteristics, migrants' living and working conditions, and social capital.

In the framework for this study, social capital along with migrant' sociodemographic characteristics, living and working conditions, helps to understand the mechanisms and pathways by which social structure, social relations, and access to resources influence differential distribution of HIV risk within a social group or a community. Social capital was included in this study because there is a strong relation between migration and social capital. Social capital is an important component of migrants' lives at destination place. As a guiding framework for this study, migration and social capital have a two-pronged relationship. On the one hand, social capital acts as a chain and helps a person to migrate and get jobs. On the other hand, migration affects one's social capital because of movement to a new and alien place, and the disruption of existing networks, norms and values. Migration involves movement of people from a well settled community with established social relations to a new place with no or very few pre-existing relationships, resulting in the disruption of their social networks, relations, cultural norms and values, and access to services and support systems. Migrants try to compensate for this loss of social capital by forming new

informal and formal networks within and beyond their own community. Not all migrants are equally successful in replenishing their social capital, leading to differential levels of social capital among the migrants which in turn may be associated with differential level of HIV risk. In recent years, social capital has been shown to be an important social construct that affects health. So far, social capital has been used more as a descriptive framework; scientific evidence on how social capital mediates the health of individuals and groups, is still lacking. An attempt has been made in this study to explore the role of social capital as a mediating mechanism in migrants' vulnerability to HIV risk.

Overall Research Goal

The overall aim of the study is to contribute to our understanding of the relationship between migration and HIV risk. This study explores migration induced 'social conditions' that lead to differential HIV risk for migrants within a seemingly similar migrant community by studying the relationship between sociodemographic characteristics, migrants' living and working conditions, and levels of social capital with HIV risk at the individual level in Rajasthani migrants in one location each in Mumbai and Ahmedabad.

Thesis Organization

This thesis has been organized into five chapters including this introductory chapter.

Chapter 2 provides a review of the literature concerning the three main themes of the study: migration, social capital and HIV risk, and their interrelationships. The existing conceptual and theoretical literature and empirical evidence in the field of migration, HIV and social capital have been discussed along with a review of the inter-relationships of migration with HIV, migration with social capital and social capital with health in general and HIV in particular. The literature review forms the background context for this study and leads to its rationale and overall research goal. The study framework and research questions are also described.

Chapter 3 deals with data collection and analysis methods. The chapter describes the study population, sampling method, study sample and measurements used in the study. The chapter also presents methods and results of factor analysis for social capital, undertaken to identify components under bonding, bridging and linking social capital.

Chapter 4 is comprised of the analyses and results of the migrants' social conditions and the relationship between these social conditions and HIV risk measures. The chapter describes the study population in terms of sociodemographic and migration characteristics, social capital and HIV risk. It also presents the relationships between HIV risk and sociodemographic characteristics and social capital. The data was collected using mixed methods. The findings from the qualitative and quantitative parts of the study have been merged together to arrive at a holistic explanation of migrants' HIV risk and its relation with migrants' social conditions in Mumbai and Ahmedabad.

Chapter 5 presents the discussion on study findings and maps out the implications of this study for research, program and policy. The study implications have been discussed in the backdrop of study objectives and findings. The chapter has two sections: Section 1 deals with the research and programmatic implications of the study in the context of migration and HIV risk relationship. Section 2 deals with research, programmatic and policy implications of social capital in the context of migrants' risk for HIV. The chapter also discusses strengths and limitations of the study. The chapter ends with the delineation of some possible future steps.

The chapters are followed by a reference list and appendix section. All the raw statistical analysis tables have been presented in the appendix section. Appendices one to twenty one belong to psychometric analyses, undertaken to identify the components of social capital. Appendix 22 to 29 contains statistical analyses tables for risk measures. Appendices 30-33 presents the original analyses for comparative HIV risk in the villages and the city and factors associated with increased sex with a sex worker in the city. Appendices 34-95 comprise original statistical tables and graphs for bivariate and multivariate analyses for relationship between HIV risk and sociodemographic characteristics and HIV risk and social capital. Appendices 96 and 97 comprise research protocols i.e. survey questionnaire, focus group guide and in-depth interview guide.

CHAPTER 2

Literature Review, Study Framework and the Research Objectives

This chapter consists of a focused review of the literature on migration, social capital and HIV/AIDS, and their relationships. A broader global review of the literature for each of these themes is followed up by a review of the India-specific literature, to allow for an understanding of how the situation in India fits into a broader context.

The chapter has been divided into three sections. Section I, titled 'Migration, Health and HIV/AIDS', contains the review of the literature on migration, and its relationship with health in general and HIV/AIDS in particular. Section II, titled 'Social Capital, Health and HIV/AIDS contains a review of the theoretical and conceptual journey of social capital and its relation with health including HIV/AIDS. Based on the literature review, section III delineates a framework for this study that binds migration, social capital and HIV/AIDS together. This section ends with an outline of the study rationale, research goal and objectives that the proposed study purports to achieve.

Section I: Migration, Health and HIV/AIDS

1. Theoretical and Conceptual Understanding

All countries and societies are affected by migration in one or other way. As per the International Labour Organization's (ILO) estimates, over 100 countries were major senders or receivers of migrant labour with 68 countries listed as major receivers, 56 as major senders, and 24 as both a sending and receiving country in 1990 (cited in, UNAIDS, 2001). Migration has increased over the years: approximately 75 million people were international migrants in 1965, whereas approximately 150-200 million people were reported to be migrants in 2000 (AIDS Infotheque, 2000; Carballo and

Mboup, 2005). For a long time, migration has been important for migrants themselves, for the sending or source communities and for the receiving or destination communities. Migration has become even more important in recent times because of the sheer volume of migration; the quick, widely and easily available means of communication and transportation; huge volumes of remittances involved; and the emerging and re-emerging infectious diseases.

The definition of 'migrants' is diverse, from the movement of seasonal laborers to a tourist, from a refugee to an asylum seeker. In the same vein, "migrants may be defined by their legal status or ethnicity, or migration can be categorized using parameters of duration, motivation, and distance" (Decosas and Adrien, 1997). Migration is generally defined in terms of movement across international borders. This definition does not do justice to the situation and context of migration in the developing and underdeveloped countries, which have huge internal migration. Movement within and between countries may be disproportionately heavy in some regions. There are approximately 200 million internal migrants in India. A more comprehensive definition of migration, which is applicable to all countries and encompasses all kinds of migrants, is the "crossing of the boundary of a political or administrative unit for a certain minimum period of time. Internal migration refers to a move from one area to another within one country. International migration is a territorial relocation of people between nation-states"[1].

[1] UNDP, 'Migration and HIV in South Asia', UNDP Regional HIV and Development Programme, New Delhi, (the booklet is not paged),

Migration has attracted the attention of social thinkers, demographers and economists for centuries. Table 1 presents a brief overview of theoretical perspectives on the origin and perpetuation of migration. One of the earliest researchers to work on migration was Ernest Ravenstein. He developed the 'Laws of Migration' based on census data from England and Wales in 1885 (Molho, 1986). Ravenstein's laws stated that the primary cause for migration was better external economic opportunities; the volume of migration decreases as distance increases; migration occurs in stages instead of one long move; population movements are bilateral; and migration differentials (e.g., gender, social class, age) influence a person's mobility.

Lewis gave a 'linear model of migration' in 1954. He explained migration in terms of differential supply and demand of labor in different regions/areas (Dubey et al., 2004). Lee, in 'push-pull' theory (1966), wrote that migration took place from less-endowed areas to well-endowed areas through 'push' created by poverty and lack of work and the 'pull' created by better wages in the destination. Neoclassical theory explained migration in terms of 'wage differentials' between the origin and destination places; while the 'new economics of migration' theory, pioneered by Stark, explained it through 'wealth differentials' or 'relative deprivation' between the migrants and prospective migrants at the origin place (Portes, 2006). Neoclassical theory viewed movement as an individual decision for income maximization (Massey et al., 1993) while 'new economics of migration' viewed it as a calculated strategy for minimizing the risk on the part of the family or household (Stark and Bloom, 1985).

Table 1: Main Theoretical Perspective on Origin and Perpetuation of Migration

Perspective/ Model	Proponents	Main Theme/s
Ravenstein's Laws of Migration	E. Ravenstein (1885, 1889)	The primary cause for migration is better external economic opportunities; the volume of migration decreases as distance increases; migration occurs in stages instead of one long move; population movements are bilateral; and migration differentials (e.g., gender, social class, age) influence a person's mobility
Linear Model of Migration	W. A. Lewis (1954)	Agriculture sector in rural areas is viewed as the 'traditional' sector with fixed supply of land, little capital, and a large pre-existing supply of labour[2]. While in contrast, the industrial sector was conceptualized as the 'modern' sector with almost no requirement for land as an input. The only requirement was accumulation of capital and it could absorb the labour supply.
'Human Capital' perspective	Sjaastad (1962)	Individuals are rational actors, have access to all the relevant information about employment opportunities, and make the decision to migrate or not after weighing involved costs and benefits.
'Push-pull' theory	Lee (1966)	Migration is seen as an outcome of poverty and backwardness in the sending areas, and opportunities or perception of opportunities in the receiving areas.
Neoclassical Theory of Migration	Sjaastad 1962; Todaro 1969; Harris and Todaro, 1970	As per this theory, some regions are endowed with surplus labour while others with a demand of labour that translates into wage differences resulting in the movement of people from labour surplus-low wage regions to labour demand-high wage regions. Based on the rational calculation of wage differentials and net gains, a person makes a conscious and calculated decision to migrate to a place that will ensure income maximization.
The New Economics of Migration	Stark, 1978; Stark and Bloom, 1985; Stark, 1991	The 'new economics of migration' views migration as a household decision taken to minimize risks to family income or to overcome capital constraints on family production activities by diversifying the allocation of household resources. Income/wealth differential between migrant and potential migrant families at origin causes migration and not the wage differential between the origin and destination places.
Migration in developing and less developed countries	Todaro (1969)	Migration is seen as a two-stage phenomenon. The first stage where the unskilled rural migrant works in low-paying informal sector and in stage two, she or he gets a more permanent modern sector job.
The 'Worlds Systems', 'Dependency' and 'Neo-Marxist' theories	Wallerstein, 1974; Frank, 1966, 69; Portes and Walton, 1981; Sassen, 1988	Labor migration is seen as a natural response to the penetration of weaker societies by the economic and political institutions of the developed world [Portes, 2006]. "While in appearance migration arises out of a series of 'rational' economic decisions by individuals to escape their immediate situation, in reality its fundamental origin lies in the history of past economic and political context and power asymmetries between sending and receiving nations" [Portes and Borocz, 1989].
Network Theory of Migration	Massey, 1989; Massey and others, 1993, 1998; Taylor, 1986, 1999	Once the number of networks in an origin area reaches a critical threshold, migration becomes self-perpetuating. Every new migrant reduces the costs of subsequent migration for a set of friends and relatives, and some of these people are thereby induced to migrate, which further expands the set of people with ties abroad, which in turn, reduces costs for a new set of people, causing some of them to migrate, and so on.

[2] As quoted in, Dubey, A., Palmer-Jones, R., Sen, K., 'Surplus Labour, Social Structure and Rural to Urban Migration: Evidences from India Data, A Paper presented at the Conference on the 50th anniversary of the Lewis Model, July 6-7, 2004, p. 1

The essence of these economic models of migration is that the rural sector, dominantly agricultural in nature, is the traditional sector while the urban sector, dominantly industrial, is the modern sector. The agriculture sector has low labor demand and has a labor surplus resulting in either the stagnation of wages or lowering of the wages. On the other hand, the modern urban sector has a high demand for labor and low labor availability and hence has higher wages. This leads to the migration of people from a rural/traditional sector to an urban/ modern sector.

However, migration does not always happen into jobs with high wages and high prestige. The majority of migrants, in the case of India, migrate to work in the informal sector of the economy as agricultural workers, construction workers, street vendors etc. Realizing the limitations of the classical economic models, Todaro (1969) proposed a two-stage model of migration for developing and underdeveloped countries. As per the Todaro Model (sometimes also called Harris-Todaro Model), migration is not a linear movement from traditional economy to modern economy; rather it is a two-stage phenomenon. The first stage is comprised of the unskilled rural migrant coming to the city to work in the low-paying informal sector. In stage two, she or he gets a more permanent job in the formal sector of economy.

Many experts have questioned Todaro's model for his treatment of the informal sector as a 'waiting room' before making their way up to the formal sector [Banerjee, 1984; Bhattacharya, 2002; Breman, 2003]. Based on their field based research, these authors have shown that the search for urban jobs is not entirely an urban–based activity and that

migrants do not enter the informal sector ultimately to move to the formal sector. The evidence in India, rather, suggests that migration from rural areas into urban areas is in the form of two autonomous streams: one where migrants go to the formal sector and the other where migrants go and find employment in the informal sector. The latter stream may or may not be able to cross-over to the formal sector. Moreover, Todaro does not offer any reason or support structure such as some government agency to help a migrant to move from an informal sector job to a formal sector job. For example, how a person with low literacy and low skills can gain literacy and skills while working to survive in the informal sector unless there is a built-in infra-and-social structure to help the new migrant from rural areas to gain new skills, which is not the case generally and is certainly not the case in India.

Another school of thought on migration has its basis in Marxism. Portes (2006) wrote that the worlds systems and neo-Marxist theories see labor migration as a natural response to the penetration of weaker societies by the economic and political institutions of the developed world, which influences the socio-economic conditions as well as the attitude of people in those societies. Market forces and capitalist policies lead to development in some regions at the cost of underdevelopment in most of the other regions, resulting in a centre-periphery relationship between the developed and underdeveloped regions/nations. The dependency of peripheries on their centres has many consequences; one of which is migration of people from underdeveloped peripheral areas to centres of development. The Marxist interpretation, Deshingkar and Start (2003) argue, focuses on how wider structures have perpetuated the exploitation of migrants by

capitalists and intermediaries. The migrant's profile in these writings is of one who is powerless, poor and perpetually exploited and in debt. Exploitation is both direct and indirect. Wages are much lower than the market rate. However, Breman's work in South Gujarat (1993) and Rogaly's work in West Bengal (2001) contradict this view and show that migration has an element of choice in it. Migrants have been able to break away from caste-based patron-client relationships of rural society in India through migration.

Some other theoretical formulations try to explain the perpetuity of migration once it has been set in motion by either structural factors or individual decisions. Recently more emphasis has been placed on social networks and the role they play in perpetuating and sustaining migration (Massey et al., 1993). Social networks act as a bridge between origin and destination places and lead to 'the emergence of such phenomena as chain migration, long-distance referral systems to fill job vacancies, and the organization of a dependable flow of remittances back to sending communities' (Portes, 2006).

It can be argued that most migration models and explanations are situated within a 'positivistic-rational' paradigm – the dominant theoretical paradigm in the 19th and 20th centuries. Migration is understood in terms of a linear movement, which follows a cause-effect model, and is explained in a mechanical-rational way. Poverty, lack of opportunity and surplus of labor in rural areas and high labor demand in urban areas due to the expansion of industries cause people to respond mechanically to move from less-developed areas to more developed areas. Migrant, in these models, is rational in his decision-making and mechanical in response to external conditions. However, these

explanations fail to take into account the imperfections and intricacies of different labor markets. This understanding of migration also neglects the social context in which individual decisions are made, the perceptions of the potential migrants of the wage differentials, and the availability of means to act upon them (Portes, 2006).

Migration is not a discrete event. Migration is a process or a social system made of various and different sub-systems. Different types of migration may have many and different stages and correspondingly may have a different nature. Migration is a dynamic process, which is comprised of the pre-departure phase, the transportation or movement phase, and the post-arrival phase, and each stage may have a different nature and characteristics (Evans, 1987; Macpherson and Gushulak, 2001). All migration cannot be captured by a single category or description. Even seasonal migration for manual work in the countryside means different things to different workers. “There are differences between migrant workers in the same stream and between streams of migrants coming to the same destination workplace” (Rafique and Rogaly, 2003). To rectify the limitations of these economic-rational models, what is needed is an ‘emic’ perspective, which lays emphasis on understanding migration as a social process by focusing on the lived experiences of migrants.

2. Migration in India

Different sources and studies present different estimates of migrant population size across different migration categories. Experts on migration in India believe that information on migration in India, especially circular internal migration, has limitations**.** Ben Rogally (1998) writes that official information on the extent of seasonal outmigration is non-existent even at the local level. Arjan De Haan (1997) concurs that migrant numbers are generally underestimated and writes that, "rates of urbanization underestimate the amount of migration. So does the Census migration data, since it registers only the number of migrants present at a particular date." Both the methods of migration estimation (i.e. rate of urbanization and Census) underestimate the total flow of migrants in India; especially the enumeration of seasonal and circular migrants.

For many decades, there has been a substantial amount of migration in India, particularly from rural areas to urban centres. The migration rate has not only been high, it has also been increasing. There were an estimated 153 million migrants in 1971; 196.3 million in 1981; and 200 million migrants in 2001. About 40 percent of these 200 million migrants are long-distance inter-state migrants out of which about one-half are rural-to-urban migrants (Skeldon, 1986; Srivastava and Sasikumar, 2003; IndianNGOs). Not all areas have similar levels of migration. Some areas have very high rates of migration while others are not so high, depending on various factors such as the level of economic opportunities, history of migration, and existing migration networks. About 78% of the households in a study of villages in Andhra Pradesh and Madhya Pradesh had at least one

migrant, working in other part of the country (Deshingkar and Start, 2003). In Shekhawati area of Rajasthan, every other household had a migrant working in another state in informal sector (Singh et al., 2004). Similarly**,** more than half of the households provided migrant labor in Dungarpur district of Rajasthan (Haberfeld et al., 1997).

a. Migration factors

In examining factors related to migration, there is a dissonance in the findings between studies done on Indian National Sample Survey data /Government of India Census and studies done locally. Based on an analysis of National Sample Survey Organization (NSSO) data of 1999-2000, Dubey and colleagues (2004) found that social structure and the possession of human capital were important determinants of rural-urban migration: individuals from scheduled castes (SC)[3] and scheduled tribes (ST) social groups and those with little or no education were less likely to migrate to urban areas. The migration rates at the national level for other castes were 3 percent as compared to 1.58 percent for SC and 0.87 percent for ST individuals. They found that: a) A person was more likely to migrate if the person belonged to the younger age group, was from a smaller household, was female, was educated and was not from the SC and ST social group; b) Increasing levels of education increased the likelihood of migration; and c) States with higher labor to land ratios tended to see higher rates of out-migration from rural to urban areas.

[3] Scheduled Castes (SCs) and Scheduled Tribes (STs) are caste and tribal groups which have been included in Indian Constitution (article 341 and 342), and have been given special status for being underprivileged and disadvantaged historically. They have been guaranteed benefits under several government programs such as reservation in government and public sector jobs.

In contrast, local studies have shown different results than the studies done based on the Census or NSSO data. Based on their fieldwork in Dungarpur, Rajasthan, Haberfeld and colleagues (1997) wrote that most seasonal migrants: belonged to the lowest classes, namely Scheduled Castes and Tribes; tended to be relatively young; and had low education levels. The main reason for seasonal migration was scarcity of land. They also found that: larger labor supply by the household was associated with being a migrant household; higher levels of education within the household tended to lower the probability of a household to provide migrant labor; living in the less developed region raised this probability; and higher income from agriculture and more live-stock-intensive household, as measured by poultry, tended to also lower the probability of a household to provide migrant labor. Based on a study of six villages each in the states of Andhra Pradesh and Madhya Pradesh, Deshingkar and Start (2003) reported that Scheduled Tribes were nearly six times more likely to migrate than the other caste; Scheduled Castes were roughly five and a half times more likely to migrate, and Other Backward Classes (OBCs) roughly three and a half times more likely to migrate than the other castes. In a study on seasonal migration in Murshidabad, West Bengal, Rafique and Rogally (2003) found that 56 percent of landless households included at least one seasonal migrant worker compared to 17 percent of landed households.

The reason for the discrepancy between the findings from the national and local level data can be attributed to the fact that the Census of India and the National Sample Survey Organization data measure all migration including students migrating for educational

reasons, women migrating because of marriage; local studies have focused on labor migration.

b. Migration characteristics in India

Indian scholars have also found the linear and economic and development induced models to be simplistic. Deshingkar and Start (2003) write that the idea of seasonal and circular migration in the 1970s challenged the earlier linear models of migration. The seasonal and circular migration was defined as characteristically short term, repetitive or cyclical in nature, and adjusted to the annual agricultural cycle. Dubey and colleagues (2004) write that "both anthropological evidence accumulated over the past several decades and village studies on rural-urban migration suggest that in South Asian context, social and cultural norms influence the patterns of migration from villages to cities and that households which find themselves in the situation of having surplus labor may not necessarily migrate first from a given rural setting".

Migration in India has three main characteristics:

- Rural-to-urban migration is increasing;
- Long distance migration is male dominated; and
- This male migration is circular in nature.

Rural-to-urban migration has become more dominant in the overall migration in India in recent years (Skeldon, 2000; Srivastava and Sasikumar, 2003). Since 1981, rural-to-urban

migration became the more important contributor to the total interstate migration whereas in the 60s and 70s rural-to rural migration was the main contributor even in inter-state migration. Based on an analysis of census data, Skeldon (2000) concludes that long-term migration in India, as in other parts of the world, tends to be more urban-oriented.

For total migration, rural-to-rural migration is dominated by women, with 41 males per 100 females in 1981. However, males dominate the long distance interstate migration, in all rural-to-urban (142 per 100 females), urban-to urban, and urban-to-rural migration streams (Skeldon, 1986). As in 1981, the inter-state migration in 1991 was dominated by male migration and the main reason for male migration was economic (55%) while the short-distance migration was dominated by females and the main reason was marriage (60%) (Srivastava and Sasikumar, 2003). On the basis of their study in Dungarpur, Rajasthan, Haberfeld et al. (1999) reported that about 91% of the seasonal migrants were men. Their average age was 26.4 years and they had low education levels. In 1991, more than 81 percent of all female intra-district and 72 percent of inter-district migrants moved for marital reasons. Economic-related migration among females accounted only for 1.6 percent for intra-district and 3.4 percent for inter-district migration. Deshingkar and Start (2003), on the basis of their study in six villages each in the states of Andhra Pradesh (AP) and Madhya Pradesh (MP), reported that there were marked differences in the gender composition of migration between the two states. In AP, the majority of migrants were male in all villages, whereas in MP, tribal villages had more female migrants. The reason for this, they write, were complex, and related to whether or not skills were gendered, cultural norms to do with women's work and restrictions on women migration.

The gender possibilities for migration were also determined by caste. For higher caste families it was traditionally often shameful for the woman to work outside her home.

It can be argued that the dominant form of migration in India is the cyclical internal migration where a male member of a family moves to the destination places within the country in search of employment, leaving the family at home. This seems to be the feature in almost all parts of the country as reported in various studies (See for Kolkata, De Haan, 1997; For Rajasthan, Haberfeld et al., 1999 and Singh et al., 2004; For Madhya Pradesh, Deshingkar and Start, 2003; For West Bangal, Rogally, 1998). The seasonal and circular (also known as cyclical, oscillatory) migration has long been part of the livelihood portfolio of the impoverished across India, it is a part of the normal livelihood strategy of the poor and is not limited to times of emergency or distress (Deshingkar and Start, 2003; Rafique and Rogaly, 2003; Waddington, 2003; Khandelwal and Gilbert, 2007). In a study in Dungarpur in Rajasthan, Haberfeld and colleagues (1999) found that within a group of migrant-labour households, income from migrant labour accounted for almost 60% of their total annual income. Based on analysis of NSSO data, 1999-2000, Dubey and colleagues (2004) found that migrants in urban areas had a standard of living, which was 60 to 100 percent higher than their non-migrant counterparts in villages.

Migration decisions are made collectively by household members and not by individuals (Banerjee, 1981; Bhattacharya, 1985; De Haan, 1997). Arjan De Haan (1997) explains the mechanism behind decisions about migration based on his study among the migrant workers in Titagarh, an industrial area in Calcutta. He writes,

"The importance of families [is] in structuring of the migration process, in determining who migrates, to what place one migrates, and whether migrant returns. *The role of family is particularly crucial because of the "circular" character of migration:* migrants continue to maintain close links with their villages of origin, often hundreds of kilometers away from the city, and continue to move back and forth between village and city. Migration is seen as a form of 'portfolio diversification' by families and remittances as part of a family's contractual arrangement. Families first invest in migrants to be able to leave, but they do so in the expectation of returns in the form of remittances; the migrant in turn continues to maintain the link, but also with the expectation of returns, for example in the form of inheritance."

Based on a study among the migrant households in Delhi, Banerjee (1981) concluded that 82% of the migrants reported having family members living within the study area. Over three quarters of the sample visited their villages regularly and two thirds reported sending money. The proportion reporting visits was higher for migrants who had family members at the place of origin, but as many as 60% of the migrants who did not have family members living at the place of origin maintained contact with rural residents through visits. In a study among 453 migrants in Shekhawati region of Rajasthan, Singh and colleagues (2004) reported that approximately 87 percent of migrants returned to their villages at least once a year.

3. Migration, Health and HIV/AIDS

Migration has wider and far-reaching ramifications not only for migrating people/ populations but also for the sending and receiving communities. Migration affects the socio-demographic features, economic characteristics and health of origin and destination societies through the movement of mostly young people in productive and reproductive age-groups; through remittances; and through expectations and burden on social, economic and health infrastructures and services. The speed of contemporary migration, the high numbers of people involved, and the fact that people are often moving from parts of the world with very distinct health conditions and disease profiles inevitably carries with it implications for the health and health care of those who move and those that receive them (Carballo and Mboup, 2005).

Evidence at the global level suggests that migration is related to poorer health. de Jong (1994) reported that Moroccan immigrants in Belgium were five times more likely to develop peptic ulcers than Belgian nationals during the initial period of settlement. In the Netherlands, the prevalence of ulcers among migrants from the Antillies, Morocco, Turkey and Surinam was up to 10 times higher than among other people, and they were 5-10 times more likely to suffer from chronic tension headaches than their Dutch counterparts. In the UK, Asian men appeared to be more prone to coronary heart disease than others (Balarajan and Raleigh, 1992), and both men and women of South Asian origin had 30-40% higher coronary heart disease mortality rates than others (Balarajan, (1991). South Asians were also significantly more likely to be admitted to hospital for heart failure and were significantly less likely to survive myocardial infarction than

others (Wilkinson et al. 1996). Similar findings have been reported for Asian immigrants in Canada, where the risk of myocardial infarction among people of Asian origin was 2-5 times higher than among non-Asian immigrants and native-born Canadians (Harrison, 1994). In Germany, migrants were estimated to be up to 5.2 times more likely to be diagnosed with TB than non-migrants (German Central Committee to Fight TB 2002) and a similar picture emerged in France (Gliber 1997), Austria (Matuschek 1997), and Spain (Jansa, 1995) [all cited in, Carballo and Mboup, 2005]. Between 1997 and 2001, 66% of all heterosexually transmitted HIV infections in the European Union were diagnosed in people from countries with high HIV prevalence (Euro surveillance Weekly 2002). Interestingly, in Belgium (Muynck, 1997) and Italy (Carchedi & Picciolini, 1997) the prevalence rates for AIDS among migrants were lower than nationals (all cited in, Carballo and Mboup, 2005). All these studies show that migrants have poorer health than the members of the host society or community.

Patel and colleagues (2006) compared migrants from India living in the UK with a population group with the same social background in India who had never migrated but were similar in all other characteristics. They found that the migrants had higher risk of cardiovascular diseases. The major influence of migration on cardiovascular risk was found to be nutritional changes leading to obesity.

At a global level, there have been numerous studies and publications on the theme of migration and HIV which establish a relationship between migration and vulnerability and risk to HIV (Kane et al., 1993; Quinn, 1994; Decosas et al., 1995; Decosas and Adrien,

1997; Caldwell et al., 1997; Brockerhoff and Biddlecom, 1999; Chardin, 1999; UNAIDS, 2001a; UNAIDS, 2001b; UNDP, 2001; Brummer (IOM), 2002; Anarfi, 2003; Poudel et al., 2003; Lurie et al., 2003; Smith, 2005). These studies report that migration not only facilitates the rapid spread of the virus along the so-called 'corridors of migration', but also causes behaviours and situations which make migrants vulnerable to HIV risk.

Lurie and colleagues (2003), in a study to investigate the association between migration and HIV infection among migrant and non-migrant men and their rural partners in South Africa, found that being a migrant, being less than 35 years old, having one or more casual partners, having symptoms of STDs in the last 4 months, and ever using a condom were the most important risk factors. Brummer (2002), in a qualitative study to assess mineworkers' vulnerability to HIV in Basotho, South Africa, found that being a migrant worker was identified as the most important reason for high risk by migrants. Condom use was very low and self risk perception was almost negligible.

Smith (2005) writes that the HIV epidemic in China was localized until the 1990s. The situation has since changed and China's migrant populations are assumed to represent one of the potentially most dangerous 'bridging populations'. Data from a survey conducted in a southwestern province of China showed that temporary migrants accounted for 13 % of the known drug users and 14.4 % of injecting drug users, while their proportion in the total pool of respondents was 1.8% and they constituted 2.5% of the working age population.

Based on a comparative study among male migrant-returnees and non-migrants aged 15-45 years in Doti district of Nepal, Poudel and colleagues (2003) found that migrants had an 8.2 times higher risk of visiting sex workers as compared to non-migrants. Migrants also had higher rates of HIV and STIs. Approximately 98 percent of the Nepali migrants in this study reported Mumbai as the destination place. It is little wonder that STIs are called *Bombay rog* (Mumbai's disease) in Doti district of Nepal. Similar patterns have been reported in Bangladesh (Siddique, 2003) and Pakistan (Gazdar, 2003). Poudel and colleagues (2004) report that most migrants experienced extramarital sex for the first time after migration and peer pressure was one of the main factors behind seeking sex at the destination place. The relationship between drinking alcohol and visiting brothels in Mumbai was reported in the focus group discussion sessions. Extramarital sex was not common among the villagers before they migrated. A large proportion of the participants sought frequent sex with multiple partners, and some continued extramarital sex even after they returned. The main factors highlighted by the migrants that influenced their sexual behaviour were: peer norms and pressure, alcohol consumption, easy availability of sex, single life and low risk perception.

India has multiple epidemics of HIV in different geographical settings and among people with different types of risk (Hawkes and Santhya, 2002; NACO, 2004; NACO, 2006; Moses et al. 2006). The HIV epidemic is no longer restricted to 'high-risk' groups. In recent years, the epidemic has diffused into the general population and into rural areas (NACO, 2006). According to the 2005 NACO[4] estimates, 57 per cent of the HIV cases

[4] For discussion on this part; please see various postings on AIDS-INDIA (AIDS-India@yahoogroups.com); 5.21 million adults with HIV in the country: NACO, 23 April 2006;

were of rural background. Goa States AIDS Control Society also reported that the HIV prevalence was increasing in the interior *talukas* (blocks) as per the 2005 estimates. Migration is an important link between urban and rural epidemics. Not many scientific studies have been conducted to understand the risk among migrant populations in India. The limited evidence that exists suggests a heightened sexual health risk among migrants. For example, in-depth interviews with 79 truck drivers and 21 helpers in a check-post near Calcutta in 1993 showed that a majority of them reported visiting between 3 and 7 sex workers in a week and that the number visited by each trucker ranged from 50 to 100 in a year (Rao et al., 1994). Most of them reported never using a condom. Blood tests in a sample of truckers in the same place in 1993-94 showed that 5.6 percent of them were already HIV-positive. In addition, several local studies have shown that HIV prevalence among ante natal clinic attendees is increasing in several regions of India (Anvikar et al., 2005; Bairy and Shivananda, 2001; Shepherd et al., 2003; Pallikadavath et al., 2005; Kumar et al. 2006). Anvikar and colleagues (2005) report that HIV prevalence in central India, a largely tribal belt with huge out-migration, has been increasing in recent years. Similarly, based on a prospective study, Bairy and Shivananda (2001) report an increase in HIV prevalence in Manipal, India. They report that earlier there was a huge difference between HIV prevalence among migrants and their wives but this prevalence gap between migrants and their wives has been decreasing over the years as migrants infect their wives. Combined data for Rajasthan and Orissa shows that HIV prevalence among ante natal clinic (ANC) attendees increased from less than .10 percent in 2003 to .80

157% jump in new HIV infections in 2005, 7 April 2006; HIV/AIDS spreading to interior talukas, 19 March 2006; Bihar: AIDS threat 5 times higher than estimated, 8 February 2006; Alang migrant workers unleash HIV crisis, 31 January 2006;

percent in 2006 (NACO, 2006). HIV prevalence in such areas was highest among women whose spouses were migrants, employed in the transport sector and factories.

A major theme in the literature is the comparison of - either the migrants' health with non-migrants at the origin place or comparison of migrants' health with the health of the host community. Another predominant interest in migration and HIV studies has been with the spatial distribution of HIV and AIDS cases and the manner in which migration is contributing to the spread of virus (Decosas et al. 1995; UNAIDS and IOM, 1998; Lurie, 2003; Soskolne and Shtarkshall, 2002). It serves an important function to show that migrants have poorer health than the members of the origin or host communities. However, it has some shortcomings. The epidemiological studies mostly follow the exposure-disease association model by identifying associations between the disease status and risk factor(s)/behavior(s), and do not explain the mediating mechanisms behind these associations (Pearce, 1996; Kaplan, 2004; Poundstone et al., 2004). Lalou and Piche (2004) write that although useful in shedding light on the epidemic's dynamics, this approach addresses the association between migration and HIV/AIDS in a mechanical manner and seems to be less interested in the association between migrants' risk and vulnerability for HIV than in the migration/spread of HIV. Moreover, this approach creates a monolithic view of the migrants and does not explain differential risks between migrants. It also does not fully explain the mediating mechanism behind higher risk among migrants. How migration affects vulnerability and risk to HIV has not been scientifically studied and the dynamic and complex links between migration and

HIV/AIDS are not well understood (Brockerhoff and Biddlecom, 1999; Soskolne and Shtarkshall, 2002).

Section II: Social Capital, Health and HIV/AIDS

1. Social Capital: Conceptual Understanding

Social capital is a sociological concept that has been adopted by epidemiology to explain mediating mechanisms of health. Out of the three main proponents of social capital i.e. Coleman, Bourdieu and Putnam, Putnam's conceptualization has been dominant in epidemiology.

In the last few decades, epidemiologists have identified a strong relationship between inequality (manifested in different forms such as income inequality, relative deprivation, and material deprivation) and health. Explaining this relationship was not possible within the bio-medical framework. This led to interdisciplinary collaborations between epidemiology and sociology. Sociological concepts like 'social networks', 'social cohesion' and 'social support' were used as mediating mechanisms to explain the differential distribution of health status (Fassin, 2003). In the last decade, social capital has gained pre-eminence among these concepts. The concept of social capital in the public health literature first appeared in 1996 in the form of an article in the *British Medical Journal* by Kaplan and in a book titled '*Unhealthy societies'* by Wilkinson. The first empirical study on social capital and health was published by Kawachi and

colleagues in 1997 and within a short time span there have been numerous studies which have established a link between social capital and health.

Before going into the details of social capital as a mediating mechanism, it will be prudent to describe it as a concept and discuss its theoretical journey to date. There are three main sources of the origin of concept of social capital i.e. Coleman, Bourdieu and Putnam (Foley and Edwards, 1999; Fassin, 2003).

In sociology, Coleman and Bourdieu theorized social capital; Bourdieu was the first one to do so; however, as his writings were in French, people mainly came to know of social capital through Coleman's writings (Portes, 1998; 2000). Coleman (1990) defined social capital in terms of its structural, relational and functional elements (Cattell, 2001). In its structural form, social capital inheres in the structure of relations between persons and among persons. It is lodged neither in individuals nor in the physical implements of production. In relational terms, the level of trustworthiness and extent of obligations fulfilled in social relations are two critical elements of social capital. In functional terms, social relations have the potential for keeping and sharing useful information. For Coleman, social capital is not a single entity, 'but a variety of different entities having two characteristics in common: they all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure" (cited in Cattell, 2001). For Bourdieu, social capital is 'the sum of the resources, actual or virtual, that accrue to an individual or group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition'(1992). In

sociological literature, social capital is structural in origin and functional in its role. It originates and inheres in structural, institutionalized modes of behaviors, relations and social networks. Social capital is functional in the sense that it serves some purpose or fulfills some function. Social capital is instrumental in the flow of goods, information and services to individuals and groups. In Bourdieu's work, the flow of goods, information and services is not uniform. The access to the resources is differential and the access is determined by the nature and quality of relations that one establishes and resources these relations possess. Even Coleman thought that social capital may be valuable in facilitating certain actions but 'may be useless or even harmful for others' (cited in Kunitz, 2004).

Putnam, in contrast, popularized a notion of social capital which ties it to the production of collective goods such as civic engagement or a spirit of cooperation available to a community or nation at large (Foley and Edwards, 1999; Fassin, 2003). Putnam defines social capital in terms of four characteristics: the existence of community networks; civic engagement; local identity and sense of solidarity and equality with other community members; and trust and reciprocal help and support (1993). Social capital, according to Putnam, refers to the features of social organization such as networks, norms and social trust that facilitate co-ordination and co-operation for mutual benefit. Putnam, a political scientist by training, conceptualizes social capital at a different level when compared to sociologists like Coleman and Bourdieu. While the sociological conceptualization of social capital in the writings of Coleman and Bourdieu was at the level of the individual or family or local social group at the maximum; Putnam conceptualized social capital at

the community or even national level; possibly to account for the arena involving the society, the state and the society-state interface.

There is a significant difference between Bourdieu's and Putnam's construct of social capital. In Bourdieu's work, the flow of goods, information and services is not uniform: there is differential access to resources. Putnam, by contrast, has popularized a notion of social capital which ties it to the production of collective goods such as 'civic engagement' or a spirit of cooperation available to a community or nation at large (Foley and Edwards, 1999; Fassin, 2003).

There have been different theoretical interpretations of social capital. Woolcock and Narayan (2000) say that within the social capital literature, there are four distinct perspectives: *the communitarian view* equates social capital with such local organizations as clubs, associations, and civic groups. In it, the main thing is the number and density of these groups in a given social group or community. *The networks view* stresses the importance of vertical as well as horizontal associations between people and of relations within and among such organizational entities as community groups and firms. Building on the work of Granovetter (1973), it recognizes that strong intracommunity ties give families and communities a sense of identity and common purpose. This view also stresses weak intercommunity ties. The *institutional view* views social capital as a dependent variable unlike the communitarian and networks views. Social capital, in this view, is the product of the political, legal, and institutional environment. The very capacity of individuals and social groups to act collectively for a collective objective is

dependent on the quality of the formal institutions. The *synergy view* attempts to integrate the networks and institutional approaches i.e. community capacity and state functioning.

Davies (2001) observes two theoretical models underpinning the social capital concept which embrace a neo-Marxist and a neo-Liberal perspective. The former is typified by Bourdieu, the latter by Putnam. A neo-Marxist approach places greater emphasis on access to resources and issues of power in society while Putnam (and others like Kawachi) defines social capital in terms of its features i.e. networks, norms, and trust that enable participants to act together more effectively to pursue shared objectives[5].

Szreter and Woolcock (2004) identify two contrasting theoretical positions in the ongoing social capital debate. One approach is the '*social support school*' where social capital is viewed 'as the nature and extent of one's social relationships and associated norms of reciprocity as connected to health outcomes via some variation of a direct social support mechanism'. Another is the '*neo-material school'* approach whose advocates, including Lynch, Smith, Kaplan and Muntaner, are against Wilkinson's proposition of 'social support as a mediating mechanism for health inequality in societies because they fear that it appears to imply that health and wealth differentials can be fixed 'on the cheap' with 'social support' and 'self-help networks', without needing to give any serious attention to the more contentious issues of inequalities in ownership of wealth and in distribution of power'. Muntaner and colleagues (2001) find the current construct of social capital overly psychological because 'the discussion so far rarely moved beyond the level of

[5] As quoted in, Harper, R., 'Social Capital-A review of the literature', Social Analysis and Reporting Division, Office for National Statistics, UK, October 2001, p. 8,9

bonding social ties'. They urge to consider the bridging connections (to broader social networks) and linking social connections (to social institutions) that determine which individuals and groups have access to and control over the health-enhancing resources in the society. They say that it is within a broad framework of appreciating the formal and informal connections among individuals, the connections among population groups, and how these individuals and groups are linked to social institutions (e.g. class-based parties) and the state that we should critically consider the relevance of social capital for population health.

2. Social Capital Conceptualization in Epidemiological Literature

Transfer of the notion of social capital from sociology to epidemiology appears to be selective because only one of the three sociological approaches to social capital, Putnam's, is used. The reasons could be understood through an epistemological analysis of the concept of social capital in epidemiology. To begin with, epidemiologists were trying to find a suitable social construct which could explain the effect of material/income inequality on health which they had established with social epidemiological methods at the ecological or community level. Second, these epidemiologists discovered social capital through the work of Putnam and all studies that refer to his work mainly use the tools that he constructed. Kawachi and colleagues (1997) adopted Putnam's communitarian view of social capital and used trust and civic engagement as the measures of social capital. Since then, this approach has dominated research in public health. As the concept of social capital was first employed by

Wilkinson (who was already tilted towards using psychosocial explanations for health inequalities i.e. explaining health inequality through stress etc.) and the exposure to the literature on social capital was Putnam's work, the conception of social capital in health research became communitarian and psychosocial in character, and was mostly operationalized at the ecological level (Foley and Edwards, 1999; Fassin, 2003; Moore et al., 2006).

In brief, it can be said that social capital in sociological literature is a property of individuals or groups at the maximum and is differentially distributed among members within a group or community where different members have unequal access to social capital. Social capital is considered instrumental in bringing something to the table for members of a group or community but it also has its downsides (Portes, 1998). The nature and content of social capital is context specific. Social capital could lead to negative effects for some members depending upon the context and nature of social capital. In epidemiology, social capital became communitarian and psychosocial and invariably was associated with positive effects for all the members of the community or nation.

Social capital, as used so far in health research, has problems at both the conceptual and operational levels. In most of the 'so-called' ecological studies, the data is gathered at the individual level and then aggregated to get ecological level measures of social capital which leaves room for alternative explanations for the effect. For example, it is difficult to determine whether the effect is truly ecological or is merely an artifact of the

individual level effect. Moreover, the explanations are given in terms of individual characteristics, such as psychosocial characteristics like stress (Liukkonen et al. 2004; Poortinga, 2006). Ecological communitarian conceptions of social capital also obscure the effects of intra-community dynamics and extra-neighborhood social connections on population health because it does not address the issue of socially structured unequal access to resources. In a qualitative study in the suburbs of Adelaide, Australia, Baum and Palmer (2002) found that context, place and available resources within the neighborhood strongly influenced the levels of social capital in those areas.

Evidence suggests that social capital does not uniformly benefit individuals living in the same community or society (Rose, 2000; Campbell, 2001; Aguilera, 2002; Booysen and Burger, 2003; Poortinga, 2006; Moore et al., 2006). At an operational level, different and selective single-item measures such as membership in an organization or generalized trust have been used as measures of social capital without anchoring them in theory.

The criticism of overly psychosocial and communitarian conceptions of social capital has led to a fruitful debate and further theoretical development of the concept which has led, in turn, to a more comprehensive conceptualization of social capital with an emphasis on structural aspects (Lynch et al., 2000; Popay, 2000; Woolcock and Narayan, 2000; Woolcock, 2001; Szreter, 2002; Pilkington, 2002; Harpham, Grant and Thomas, 2002; Baum & Ziersch, 2003; Szreter and Woolcock, 2004a & 2004b; Taylor et al. 2006). Szreter and Woolcock have come up with a conceptual framework[6] for examining social

[6] Before Szreter and Woolcock (2004) theorized the multidimensional construct of social capital, there have been initial efforts in refining the concept. Main efforts among these were made by Woolcock [1998] and

capital and health which promises to reconcile the opposing camps - the '*income inequality* or *social support'* school, and the '*neo-materialist* or *political economy'* school (Kawachi et al., 2004).

As per this framework, social capital has been defined in terms of the different dimensions and scales it can have in different societies. Bonding, Bridging and Linking social capital have been recognized as the three dimensions of social capital (Woolcock and Narayan, 2000; Szreter and Woolcock, 2004). Bonding social capital refers to intracommunity relations and reflects the networks, participation rates and level of trust and reciprocity among the community members. Bridging social capital refers to inter-community horizontal relations and reflects inter-community networks, participation rates of migrants in such networks and trust in those networks. Linking social capital is defined as norms of respect and networks of trusting relationships between people who are interacting across explicit, formal or institutionalized power or authority gradients in society. The vertical relationships of a community with government departments, welfare programs, NGOs, donor agencies and other institutions, define the vertical linking social capital. It is different from bridging in the sense that bridging social capital refers to

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Woolcock and Narayan (2000). Woolcock **(**1998) initially identified two distinct but complimentary forms of social capital, based on two concepts, '*embeddedness*' and '*autonomy*'. These two will have different shape and forms when employed at micro- and macro-level. Embeddedness at the micro-level refers to intra-community ties while at the macro-level it refers to state-society relations; autonomy at the micro-level refers to extra-community networks, while at the macro-level it refers to institutional capacity and credibility. So, on the basis of this discussion, Woolcock (1998) gave four dimensions of social capital: integration and linkage at the micro level, and integrity and synergy at the macro level. He says that they can have different combinations and micro and macro levels interact with each other. Narayan and Woolcock (2000) added bridging social capital to hitherto social capital's conceptual framework of bonding social capital only. Equal credits should also go to the proponents of social support/relative deprivation school such as Wilkinson, Marmot and Kawachi and Political Economy/Neo-material school such as Lynch, Smith and Muntaner who have debated on this issue through their thought provoking and insightful contributions in various journals.

relationships between individuals or communities which are more or less equal in terms of their status and power. Szreter and Woolcock (2004) write that linking social capital is especially important in the case of poorer communities and in terms of welfare programs or health interventions, such as HIV prevention programs, because it is the nature and extent (or lack thereof) of respectful and trusting ties to representatives of formal institutions that has major bearing on their welfare. Woolcock (2001) treats the linkages in terms of 'capacity to leverage resources, ideas and information from formal institutions beyond the community'. To balance the pre-eminence of psychosocial forms of social capital, it has been advocated that social capital should be measured in terms of structural and cultural/cognitive components (Krishna and Shrader, 2000; Harpham et al., 2002; van Deth, 2003). The structural aspect of social capital refers to social structures such as networks, associations, institutions, institutionalized relations and connections. Cognitive forms relate to the more subjective or intangible elements such as trust, obligations, values, support, sharing and norms of reciprocity.

3. Social Capital, Health and HIV/AIDS

Although the concept of social capital is relatively new, there have been numerous studies which have established a link between social capital and health (Kaplan et al., 1996; Wilkinson, 1996; Kawachi et al., 1997; Kennedy et al., 1998; Wilkinson et al., 1998; Kawachi et al., 1999; Kennedy et al., 1999; Lochner and Kawachi, 1999; Veenstra, 2001; Rose, 2000; Subramaniam et al., 2001; Hendryx et al., 2002; Moore et al. 2006). Most studies have concluded that there is a positive relationship between high levels of social capital and positive health outcomes/status. However, Portes (2000) cautions us against the 'downside' of social capital. Based on a study among immigrant children in the United States, Portes (2000) concludes that the key point of this analysis is that the ready attribution of positive effects to social capital, be it in its individual garb as social networks or in its collective one as civic spirit, is premature because observed effects may be spurious or because they are compatible with alternative explanations arising from different theoretical quarters.

The studies on the relationship between social capital and HIV/AIDS, though, are few. In a study of 1211 respondents in the township of Khutsong in the Carletonville, South Africa, Campbell and colleagues (2002) reported that the relationship between social capital and sexual health risks including HIV/AIDS was complex – while some results were positive, some others were in the negative direction. Their main conclusion was that all organizational memberships did not result in safer sexual behaviour. The nature of membership was also equally important. For example, belonging to a church reduced the

likelihood that men would have casual partners and that older men would drink alcohol, while belonging to a sports club reduced the likelihood that young men would be HIV-positive. On the other hand, for both men and women, *stokvel*[7] membership was associated with increased sexual health risks.

Holtgrave and colleagues (2003) studied 48 out of 50 states in the US and found that lower amounts of social capital were associated with higher risks of HIV and sexually transmitted diseases, as well as with higher rates of risky adolescent sexual behaviour. Morrison and colleagues (2005) studied a Caribbean community to understand the relationship between social capital and HIV/AIDS awareness among adolescent girls. They found that the community was a close-knit unit in which girls were social as well as economic participants. Girls felt safe, trusted their elders and had an awareness of health and HIV related issues.

As a mediating mechanism, social capital has been shown to stop the breakdown of social cohesion and hence to act as a buffer against socio-economic disadvantage. Poundstone and colleagues (2004) write that social capital may affect health through 1) the presence of health promoting behaviours; 2) access to services and amenities; 3) levels of mutual trust in a community; and 4) greater political participation, leading to policies that are more likely to benefit all citizens. It also influences health related behaviour by promoting diffusion of health-related information, thus increasing the likelihood that

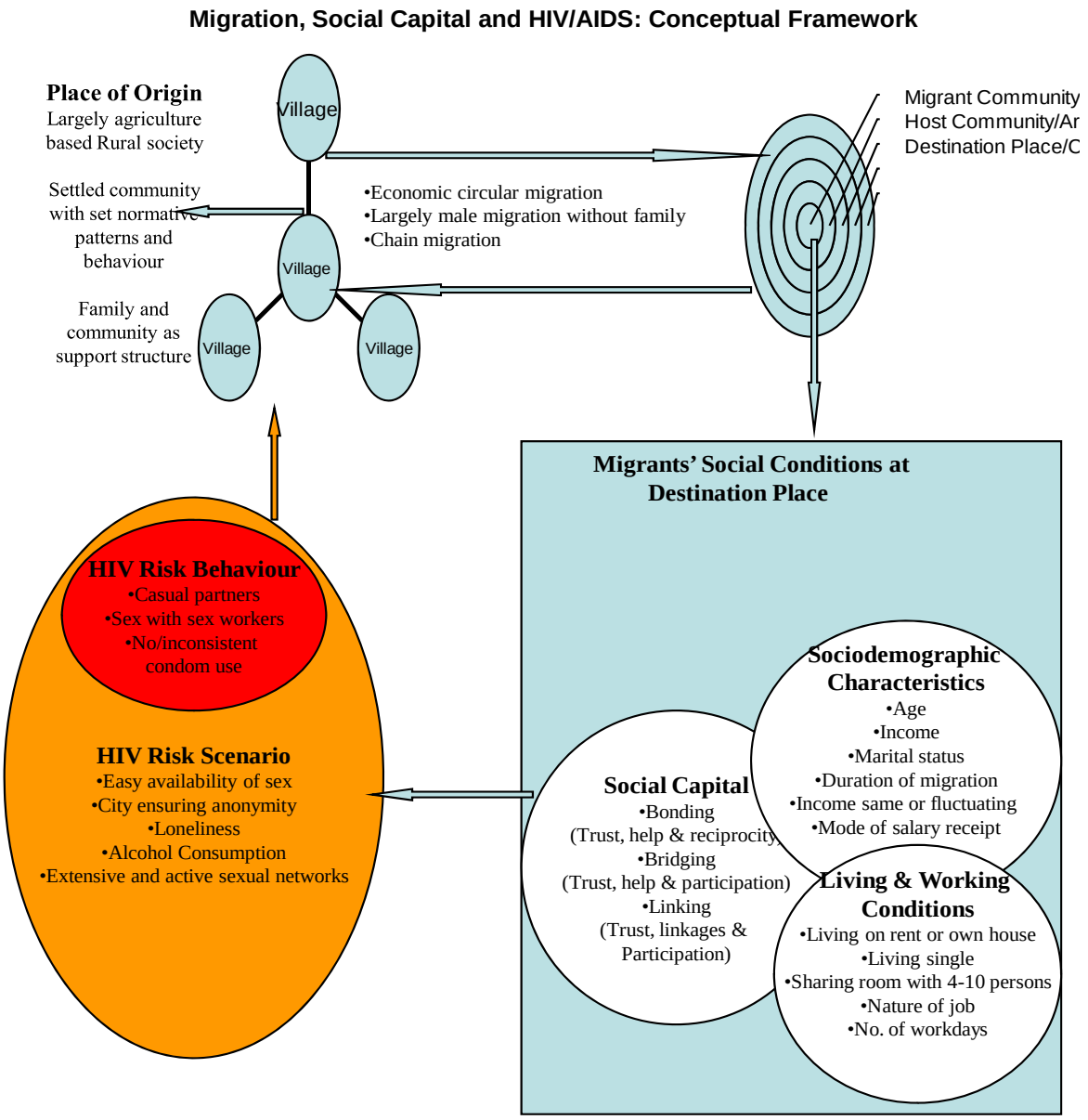
[7] Stokvels are places where people meet on a regular basis and contribute a small sum of money to a common pot and members take turns to take home the pot. The business side of the meetings is accompanied by a social gathering, usually involving the sale and consumption of alcohol. The result is that poor people periodically have access to a relatively large sum of money and the context involves bonhomie and alcohol consumption.

healthy norms of behaviour are adopted. Islam and colleagues (2006) write that it is thought that social capital may generate material/market and non-material/non-market returns to the individual. Material returns may include higher wages, better employment prospects or reduced transaction costs, while non-market returns may include improvements in the quality of the individual's relationships and improvements in health or even happiness. For migrants, different dimensions of social capital may have a relationship with HIV risk, individually as well as collectively. For example, bonding social capital may provide social support and a sense of security in an alien place; bridging social capital may provide information on jobs and health services; and linking social capital may make health services accessible in a culturally sensitive and respectful way.

Section III: Study Framework, Rationale, Research Goal and Objectives

Based on the literature review, a conceptual framework was developed for this study. The conceptual framework, presented below, brings together migration, social capital and HIV risk in a single framework. To arrive at a comprehensive framework for this study; first, a migration-HIV risk framework has been developed based on the existing literature. At the second stage, migrants' lived experiences at destination place have been analyzed. As a final step in formulating the study framework, social capital has been brought in to understand migrants' assets or resources in terms of their social relations with their community members, local people and linkages with services. A schematic representation of the comprehensive study framework is given in Figure 1.

Figure 1: Study Conceptual Framework



Migration-HIV Risk Framework

Evidence at the global level suggests a strong relationship between migration and HIV/AIDS. However, to assume that this relationship is similar in all cases of migration and for all phases of HIV epidemic is erroneous. It is important to know the epidemic phase, and sexual networks and transmission dynamics to understand how an epidemic will progress and what contribution different population groups such as migrants would make in the progression of the epidemic in different regions (Blanchard, 2002). A plausible migration-HIV risk model (presented in Table 2) will have to account for the phase of the epidemic, the nature and extent of sexual networks at origin and destination places of migration and the frequency of circular migration between the origin and destination.

Two additional factors are important in HIV transmission dynamics: partner change and duration of concurrent or serial partnerships. In migrants, this will translate into high risk behaviour at destination place and frequency of return to their long duration partners i.e. spouses or other regular partners. Based on a study in rural South Africa, Kahn and colleagues (2003) write that men who only return once or twice a year seem more likely to report multiple partners than the locally employed men. Men who return home on a monthly basis are the least likely of all men to report multiple partnerships. So, those who return more frequently have higher chances of infecting partners but have low risk behaviour. Those who return less frequently have higher chances of infecting their partners because they have multiple partnerships but the infrequency of their visits may

reduce the likelihood of transmission to their long-term partner. However, if the short duration migration is associated with high circularity and high risk behaviour, it would have major impact on HIV spread at the origin place. The contribution of migration in the spread and efficacy of migration vis-à-vis other factors will be determined by the complex interplay of migration characteristics (migrants' risk behaviour, frequency of return to origin etc.), epidemic phase (low, medium or high) and nature of sexual networks (closed or restricted or open ended). If migrants have multiple partners at the destination place in an open sexual network context and the frequency of return to the native villages is high, migration will not only connect the areas of prevalence gaps but also lead to the spread of infection in the rural population. The epidemic potential of migration in the spread of the infection into the origin place, though, will depend on whether the sexual networks at the origin place are closed or open.

The Migration-HIV risk model described in Table 2 proposes three broad analytical scenarios, which may vary according to the interplay of contextual factors and the state of local HIV prevention programming.

Table 2: Migration-HIV Risk Model[8]

	Migration specific risk characteristics	Types of sexual networks and sexual structures	Epidemic potential migration and potential examples	Epidemic type (epidemic phase) at origin place
1	Migration across prevalence gap areas; low risk among migrants; low circular return rates	Closed and restricted sexual networks at the origin and destination	Migration connects places of prevalence gap (Example: Most of the 'C' category districts in NACO's list)	Truncated (Low prevalence)
2	Migration across prevalence gap areas; high risk behaviour (multiple partners) at destination; frequent return to origin place	Open networks at the destination but closed or concentric networks at origin (with spouse and other more or less regular partners); low risk sexual culture at origin place	Migration spreads HIV (Example: Shekhawati region in Rajasthan)	Truncated to concentrated (Low to Medium Prevalence)
3	Migration across prevalence gap areas; high risk behaviour with multiple partners at the origin and destination; frequent return to origin place	Open and expanding sexual networks with multi-partners at origin and destination (with connections to outside networks); high risk sexual culture at origin place (e.g. presence of sex work)	The role of migration is important in initial years but others local factors may also be important in later stage (Example: Ganjam districts in Orissa)	Concentrated to generalized (High Prevalence)

In the first scenario of the model, migration acts as a bridge for HIV transmission, connecting low and high (or medium) prevalence areas through mixing and bridging between members of the two communities (Herdt, 1997; Lurie, 2003, Aral, 2004; Aral, Lipshutz and Blanchard, 2007). The only prerequisite for this stage is that migration is happening from areas which have low prevalence as compared to the destination areas where prevalence is higher. Migration is an important factor in this stage of epidemics as

[8] This Migration-HIV Model is based on Blanchard's theoretical paper entitled 'Population, pathogens, and epidemic phases: closing the gap between theory and practice in the prevention of sexually transmitted diseases'; *Sex. Transm. Inf.* 2002; 78; 183-188, and a report entitled 'AIDS in South Asia' for the World Bank written by by Moses, Blanchard and Kang et al. (2006). The principles and ideas from these two sources and others (Aral, 2002;2004; Lurie 2003a; 2003b) have been applied in order to examine the relationship between migration and HIV risk based on a contextual understanding of epidemic phases, migration characteristics and sexual networks.

it connects the low prevalence area to the high prevalence area. The epidemic potential of migratory processes will depend on the level of migrants' risk behaviour at the destination and the nature of sexual networks in the origin community. If the risk behaviour of migrants is low, the frequency of visiting the origin place low and sexual networks are closed, then the epidemic at the origin will remain low. The only infections could be in migrants (represented by scenario 1 in the model). However, if migrants have high risk behaviour at the destination place and the sexual networks at origin place are closed and concentric (i.e. migrant having relation with spouse or a regular partner) then migration may lead to the spread of infection in the origin community through spouses and regular partners (scenario 2 in the model).

An example for the first type is any category 'C' district[9] while the example for the second scenario could be Shekhawati region in Rajasthan. Category 'C' districts are the districts which have less than 1 percent HIV prevalence among pregnant women attending antenatal clinics (ANC) in all sites during the previous 3 years, with less than 5 percent in all high risk group (HRG) sites but have known hot spots (migrants, truckers, large concentration of factory workers etc). The ANC prevalence as per the 2006 estimates is .3 percent in Sikar district of Shekhawati region (NACO, 2006). However, a community based biological survey found the prevalence in migrants and migrants'

[9] National AIDS Control Organization in India has categorized districts in A, B, C and D categories depending upon the HIV prevalence in ante-natal clinics (ANC) and high risk groups (HRG) as per the 2006 HIV prevalence estimates. Category 'A' districts have more than 1 percent prevalence in ANC attendees in the last 3 years. Category 'B' denotes those districts which have less than 1 percent ANC prevalence in all the sites during last 3 years with more than 5 percent prevalence in any high risk groups' (HRG) site (sex workers, men having sex with men and injecting drug users). Category 'C' districts are the districts which have less than 1 percent ANC prevalence in all sites during last 3 years with less than 5 percent in all HRG sites but have known hot spots (migrants, truckers, large concentration of factory workers etc). Category 'B' and 'C' districts are important from the point of this study as they are concerned with HIV risk hot spots including presence of migrants in high concentration in the district.

spouses as 1.41 and 1.04 percent, respectively (ICHAP, 2005). Migrants engage in high risk behaviours at the destination place and the sexual networks at the origin are closed and include migrants' spouses or regular partners. There are no established sex work sites in the rural areas in the Shekhawati region.

In the second scenario, migrants engage in high risk behaviours at the destination place and have high return frequencies. Additionally, in this scenario, there are open and independent sexual networks at both the origin and destination. The role of migration remains important but may be overshadowed by the efficacy of the local networks in sustaining the epidemic with or without migration in the longer run. In the initial stages of HIV epidemic, migration will be the main factor in HIV transmission. However, over the years others factors such as local sexual structures and culture will become more important in sustaining the epidemic.

Examples of the initial and later stages of the second scenario are available in the published literature and are briefly described here. Ganjam district in Orissa has high rate of migration and migration happens to high prevalence places like Mumbai and Surat. As per NACO 2006 estimates, the HIV prevalence among migrants was estimated to be more than 5 percent while the prevalence among ANC attendees was estimated as 3.25 percent. The HIV prevalence among ANC attendees was less than .10 percent in 2003. Surveillance data pertaining to migrants is not available for Ganjam in 2003. This suggests very high risk behaviour among migrants at destination places and open ended sexual networks at destination places. Within 3 years, the prevalence jumped from .10 to

3.25 percent among ANC attendees. The local voluntary counseling and testing centre (VCTC) must have noticed high HIV incidence among migrants and migrants' spouses to warrant a surveillance site for migrants.

The second stage in the scenario can be witnessed in the villages of Bijapur district in Northern Karnataka. Halli and colleagues (2007) report that migration, which was an important factor in the initial stages of HIV epidemic in Northern Karnataka, has ceased to be an important factor in HIV transmission once the overall prevalence in the region has reached the 'high prevalence stage'. Instead, other factors such as local sexual networks, especially those involving migrants' spouses, have become more important. In another study in the same area, Blanchard and colleagues (2007) have found that there are strong linkages between commercial sexual networks in the rural areas in southern Karnataka and the sexual networks in urban centres in adjacent state of Maharashtra. Migration of male labour and female sex workers connect the sexual networks in the two states.

Similar results have been reported by Lurie and Colleagues for high prevalence areas in South Africa. Lurie and colleagues have published several studies on migration and HIV/AIDS in the Hlibisia Migration Project in KwaZuly/Natal regions of South Africa, which shed light on the relationship between migration and HIV in general and the role of migration in HIV spread in a mature epidemic in particular. (1997; 2003a; 2003b). Lurie and colleagues found that although migrants had 2.4 times the risk of being HIV positive than non-migrants; HIV risk among women in the origin place was not

dependent on being a partner of a migrant (2003a). In another study, entitled 'Who infects whom?', Lurie and colleagues found that one-third of the discordant couples had female as the infected partner, indicating that they got infected outside their primary partnership (2003b). It can be deduced from these studies that migration is not the only factor for epidemic progression in origin community in a mature epidemic stage. Local sexual relationships and networks are equally important factors. Based on a mathematical modeling study on the data from the same project i.e. Hlabisa Migration Project, South Africa to determine the role of migration in spreading HIV/AIDS, Coffee, Lurie and Garnett (2007) conclude that the modeled epidemic spread more slowly in the absence of migration. Long-distance migrants' risk increased from 5 percent to 12 percent with migration alone, and was further compounded by migration-associated risk behaviour up to a peak of 32.5 percent. Another important finding of this study was that the long-term prevalence rates were elevated among non-migrant men and women only if migration was associated with an increase in partner change rates. They conclude that migration must be accompanied with changes in sexual behaviour and frequent return to the origin community to affect the prevalence as the epidemic progresses.

Migration has an important role even in a mature epidemic stage in the sense that it injects new infections in the community. In addition, migration also plays a role in changing the culture (general as well as sexual) in the origin and destination places. Sex work sites generally emerge in destination places near where migrants live or work (Decosas and Adrien, 1997). Migrants come back to the community of origin with changed behaviour and with more material resources. Migrants continue their destination

place behaviour at the origin place and introduce new cultural norms and practices in the origin community. Poudel and colleagues (2003; 2004) found that migrants did not get involved in extra-marital sex in *doti* districts of Nepal before migration but did so after their return from Mumbai. Alcohol consumption was also high among returning migrants. Absence of male migrants may also lead to high risk behaviour among spouses of the migrants (Lurie et al., 2003a; 2003b; Halli et al., 2007)

Migrant Life at Destination Place

Migrants are vulnerable to health risk in general and to HIV/AIDS risk in particular. However, within a group/community, the members do not have similar levels of risk. To understand the mediating mechanisms of this differential distribution of health outcomes of migrants, a framework, which could identify and measure the risk factors as well as assets/resources at migrants' disposal, is needed. The assets and resources will have to include their human capital, their living and working conditions, and their social relations within and outside the community. The human capital of a migrant comprises his work-skills and socioeconomic status while the lived experiences comprise living conditions, working conditions, availability and accessibility of services, and social support structure.

It is estimated that there are 200 million internal migrants in India, of which approximately 80 million are long-distance interstate migrants (Skeldon, 2003; Srivastava and Sasikumar, 2003). Poor people (mainly male) from low castes with little or no education resort to migration from rural areas in underdeveloped regions to developed

regions (mostly cities) in the hope of better economic opportunities. This migration is usually circular in nature with migrants periodically moving back and forth between the origin and destination places. The majority of the migrants works in the informal sector and lives in slums. There is rarely provision of safe drinking water or hygienic sanitation (De Haan, 1997; Haberfeld et al., 1999; Skeldon, 2003; Deshingkar and Start, 2003; Srivastava and Sasikumar, 2003; Dubey et al., 2004; Singh et al., 2004).

If we attempt a general profile of migrants based on the available literature[10], then we see that selective labor demands and skill-selection favor either male only or female only migration. Family migration happens, especially short-duration and short-distance, in seasonal, and agricultural and brick-kilns; but long-distance inter-state migration is mostly male migration. A migrant leaves his family and a well settled way of life behind to a new place for economic reasons. A typical migrant is in the age group of 15-49. She or he has had some level of education, ranging from less than primary to graduate. Mostly, she or he comes from the lower socio-economic sectors of society and invariably belongs to Scheduled Castes, Scheduled Tribes or other backward classes.

For the most part, these migrants have low skills or some trade-specific skills only learnt traditionally, and are employed in the informal sector. Based on a study in Dungarpur, Rajasthan, Haberfeld and colleagues (1999) found that migrants were mostly concentrated in a small number of jobs in the informal sector – 27.5% in manual,

[10] This profile of the 'lived experiences' of migrants draws on various studies and publications such as Haberfeld et al. 1999; Khandelawl and Gilbert, 2007; Salaff and Greve, 2003; Kundu and Sharma, 2001; Rogally, 1998; Rafique and Rogally 2003; Srivastava and Sasikumar, 2003; Waddington, 2003; UNAIDS, 2001; Sundar and Sharma, 2002.

unskilled jobs, 26% in construction. The nature of the job migrants have ranges from manual to factory worker to petty contractor. Earnings also range from a meager INR 50 to INR 250 per day (approximately 2-5 Canadian dollars). Wages tend to be poor in the case of highly vulnerable casual factory workers, domestic laborers, workers on *dhabas (small eateries)* or farm laborers. Migrants often find discordance between the expected wage and living conditions of the destination place and the reality upon their arrival at the destination place. The working conditions are tough, mostly outdoors, in hot and humid or very cold conditions. Migration is for economic reasons and most of the migrants work overtime to augment their incomes. Working for more than 12 hours is very common. The working sites generally lack the most basic amenities such as drinking water and toilets. The labour and employment opportunities are usually short term, irregular, unstable and highly prone to fluctuations in the market.

The migrant workers are crowded into the lower ends of the labour market and have few entitlements *vis a vis* their employers or the public authorities in the destination areas. Migrants, generally, have no social security provisions from the government or employers. Social security provisions in the country have been confined only to workers in the organized sector, while those in the informal sector mostly have no protection against any kind of risk with regard to income, employment and health. They also have no protection against exploitation, as there are no written employment contracts/agreements.

Migrants have meager personal assets and suffer a range of deprivations in the destination areas. Migrant laborers, whether agricultural or non-agricultural, live in deplorable conditions. Laborers working in harsh circumstances and living in unhygienic conditions suffer from serious occupational health problems and are vulnerable to disease. Migrants cannot access various health services due to their temporary status. Free public health care facilities and programmes are not accessible to them.

For migrants, the destination place is a new world with old social structures ruptured and new social structures yet to be understood and negotiated. Migrants are very often faced with poverty, discrimination and exploitation, alienation and a sense of anonymity, limited access to social, education and health services, separation from families and partners, and separation from the socio-cultural norms that guide behaviour in stable communities (Decosas et al., 1995; IOM, 2002; Toyota, 2003). Rafique and Rogaly (2003) report that anxiety about family left behind, no guarantee of jobs at the destination place, and uncertainty about the conditions of work, whether they would be paid properly, and what would happen if they would fall ill, all contribute to migrants' vulnerability.

Migrants are excluded from geographically based social welfare programs at the place of origin because of their absence (Rogally, 1998; Rafique and Rogally 2003) and all government programs and health services at the destination place because of their temporary/non- resident status (Srivastava and Sasikumar, 2003; Waddington, 2003). They may have little access to HIV/AIDS education health services, or means of HIV prevention such as condoms and STI treatment services and hence have poor health

service utilization (Sundar and Sharma, 2002; Wolffers et al. 2000). They are seen as a burden on stretched urban resources and infrastructure. They generally do not receive services from police, health department or local politicians. Access to healthcare is only available through private clinics. This is both because of the way migrants are treated in public hospitals and because of issues around their status of being temporary/illegal residents at destination places.

Factors such as loneliness, having disposable incomes, peer pressure, recreational options, and freedom from social norms may encourage people to take risks which leave them vulnerable. Mobile populations are often marginalized, which results in low self-esteem and short-term survival strategies. Although migration is within the same country, India is culturally and linguistically so diverse that internal migration is akin to international migration. Cultural and linguistic barriers heighten their lack of access, as do unfamiliarity with the community. The instability of mobility also increases the vulnerability of the migrants at the destination place (Brockerhoff and Biddlecom, 1999; UNAIDS, 2001; Wolffers and Painter, 2002; Wolffers et al. 2002; Crush et al., 2005). Migrants' vulnerability could be generalized as well as particular. Generalized and particular vulnerability may influence each other. Generalized vulnerability is determined by the lived experiences in their daily life. Vulnerability to a particular outcome such as HIV/AIDS will be dependent on their generalized vulnerability as well as other specific risk factors such as absence or presence of high risk behavior, knowledge and attitudes, and the presence or absence of health promotion programs.

Migration, HIV Risk & Social Capital

The relationship between migration and social capital has two dimensions:

1. The role of social capital in the process of migration; and

2. The impact on social capital as a consequence of migration.

People who are socially related to current or former migrants have access to social capital that significantly increases the likelihood that they, themselves, will migrate and migration follows the pattern of chain migration where earlier migrant members from family, community or village help the later migrants (Banerjee, 1983; Palloni et al., 2001). On the other hand, the absence of certain types of social capital, for example networks or contacts with prospective employers, may preclude some households from having the option to migrate (Kothari 2002: 6)[11]. This explains why some regions have high out-migration and others do not. This also explains why there are clusters of migrants from the same origin region/community in a particular section of a destination urban area.

On the other hand, migration affects the social capital of the migrants. Migration as a process involves the movement of people from a settled community with set socio-cultural and normative patterns to an unknown place/community. The support system in the form of family and community and linkages with various services at origin are lost due to migration. De Haan (2000:14) writes that migration may be more likely to lead to a loss of social networks at the place of origin, as well as isolation in insecure living and working conditions

[11] As quoted in, Waddington, Clare 'Livelihood Outcomes of Migration for Poor People', Development Research Centre on Migration, Globalisation & Poverty', University of Sussex, December 2003, p.9

at the destination. Migration affects social capital and reduces the stock of social capital in the new location because of a geographic move or living in a different state and region from where one grew up leading to a loss of social networks, loss of social support structures, isolation and poor living and working conditions (Boisjoly, Duncan & Hofferth, 1995; Booysen and Burger, 2003).

Migrants are not inert and passive witness to their loss. Rather, they tend to make up for the loss of social capital by building more friend-based social capital for support, networking for getting and retaining jobs, and making linkages for services and benefits (Boisjoly, Duncan and Hofferth, 1995; Aguilera, 2002; Aguilera, Massey and Douglas, 2003). Migrants gain access to social capital through membership in networks and institutions, and through linkages with formal institutions and then convert it into other forms of capital to improve or maintain their positions in society, for better economic outcomes or to counter the vulnerabilities (Coleman, 1990; Portes, 1998).

But not all migrants are equally successful in replenishing their loss of social capital, resulting in differential levels of social capital among members of a migrant community. Social capital is a resource that membership in a group provides (Bourdieu, 1986; Portes, 1998), but it is limited by the resources that a network can provide, as not all networks have equal resources. So, social capital is not only dependent on migrants' memberships but also on the nature and resourcefulness of the networks they join. Hence, social capital is not a homogenous resource that is equally created, sustained and accessed by all members of a particular community.

The construct of social capital in this study follows Bourdieu (1992) and Portes (1998; 2000) in theorization and Szreter and Woolcock (2004) and Mignone (2004) in its operationalization of social capital. As the main objective of the study was to understand the differential HIV risk among migrants within Rajasthani community, social capital was measured at the individual level. Following Bourdieu's conceptualization of social capital, migrants can have differential levels of social capital, depending on the 'actual or potential resources' they possess or can access in the time of need. Following Portes, social capital will mostly have functional role but can have negative effect also. The construct of social capital in this study is multidimensional. The domains of social capital comprise bonding, bridging and linking social capital. A migrant will have low, medium or high social capital depending upon level of trust and reciprocal nature of relations with his own community members, local people and migrants from other states, and with services, service providers and authorities, and participation in network, association or group. Each domain of social capital was measured through an array of questions.

In the framework for this study, social capital along with migrants' sociodemographic characteristics, living and working conditions, helps to understand the mechanisms and pathways by which social structure, social networks, and access to resources influence differential distributions of HIV risk within a social group/community or between communities.

Study Rationale

The literature on migration and HIV shows that migration is related to heightened HIV risk, but migration, per se, does not cause HIV; rather, it causes conditions which heighten HIV risk in migrants. Some migrants are more at risk for HIV than others. Why some migrants have a higher risk for HIV than others and what conditions migration creates that lead to a heightened risk for migrants have not been adequately studied so far at the global level; even less so in India which has high internal migration as well as an HIV epidemic. This research study is an attempt to disentangle these conditions and explore their relations with HIV risk. The 'conditions' that this study attempts to explore include sociodemographic and migration characteristics, and social capital.

The overall aim of the study is to contribute to our understanding of the relationship of migration and HIV risk. This study explores migration induced 'social conditions' that lead to differential HIV risk for migrants within a seemingly similar migrant community by studying the relationship of sociodemographic characteristics, migrants' living and working conditions and levels of social capital of migrants with HIV risk at the individual level in one location each in Mumbai and Ahmedabad.

Study Objectives

1. To understand the social conditions and lived experiences of Rajasthani migrants by analyzing their sociodemographic characteristics, living and working conditions and social capital;
2. To understand migrants' HIV risk behaviour in the city and whether migration is associated with increased risk in the city as compared to HIV risk in villages;
3. To understand the relationship between sociodemographic characteristics and HIV risk at destination places;
4. To understand the relationship between social capital and HIV risk at destination places.

CHAPTER 3

Methods

Study Sites and Population

The study was conducted among Rajasthani migrants in Mumbai and Ahmedabad. Kherwari in Mumbai and Piplaz in Ahmedabad were the two study locations. The rationale for selection of Rajasthani migrants were: (a) Rajasthan is a net-outmigrating state and studies have shown that migrants have higher HIV risk than non-migrating populations; (b) the principal investigator has experience of working with the Rajasthani migrants and hence is well informed about their culture and language. The reasons for selecting Mumbai and Ahmedabad were: (a) approximately 36 percent of Rajasthani migrants go to Mumbai (which is a high HIV prevalence environment); and (b) Gujarat (Ahmedabad is capital of Gujarat) is a middle HIV prevalence environment (Singh et al. 2004). Kherwari and Piplaz are two residential colonies with large concentrations of Rajasthani migrants. Kherwari is in southern parts of Mumbai near Bandra railway station while Piplaz is on the outskirts of Ahmedabad. Both are spread over a one square kilometer area. There are approximately 500-600 houses in each locality. The majority of migrants lives in rented rooms and 5-10 migrants share a room. There are some migrants who migrated to Mumbai a long time ago and have their own houses and live with families. Most migrants in Kherwari work in the construction sector, while migrants in Piplaz work in textile factories.

Sample Selection and Sample Size

There are approximately 3000-4000 migrants at each study site. All the migrants at these two locations were covered under the CIDA funded University of Manitoba project. The project had created a list of all the Rajasthani migrants in these two locations. The list with names of all of the migrants at each study site formed the sampling frame for this study. However, because the list was approximately 9 months old (the project ended in March, 2006), it had to be updated to include the new migrants using the snowball method.

All adult migrants from Rajasthan (ages 18 and above) living at the two study locations at the time of study were eligible to be included in the sampling frame from which a random sample was selected. The sample was randomly selected through a stratified sampling method. The sample was stratified at two levels, age/duration of stay and marital status. The literature on vulnerability and risk to HIV has evidence that age, duration of stay and marital status are important determining factors. Stratification ensured representation of people from these important strata. The sample size for different strata was determined according to their proportion in the overall sampling frame. The random numbers were generated with the help of a computer and applied to the stratified numbered lists. These randomly selected individuals formed the sample. For the quantitative surveys, it was proposed to have a sample size of 800 migrants for each study site. This sample size provides statistical power of more than 80% to detect a 2.5 fold difference in risk behaviour between migrants with low social capital and migrants with high social capital,

assuming 3 percent of migrants with high social capital have high risk behaviour (measured through various measures such as having had a casual partner at the destination place in last 12 months; having had sex with a sex worker at destination place in last 12 months; and no or inconsistent condom use with a sex worker). Achieving good response rates in survey research is essential to improve the representativeness of the survey and reduce participation bias (Fenton et al., 2001). To improve the response rate, all sampled participants were contacted individually and personally by the members of the field research team and were asked to participate in the study. The surveys were filled in one-to-one and face-to-face mode which also helped increase the response rate. Three participants in Mumbai and two in Ahmedabad refused to participate. The reason for non-participation was 'being too busy'. The non-participants did not differ much from the participants and the number was also low so no separate analysis was thought necessary.

Ethical considerations before commencing the study and in the field

Prior to data collection, study approval was obtained from the Research Ethics Board at the University of Manitoba. All stipulations of this committee regarding data analysis, storage and interpretation were followed. In the case of research involving data collection in a country other than Canada, the Research Ethics Board, University of Manitoba also requires ethical approval from an institute in that country. The study was submitted to the St. John's Medical College Ethical Review Committee in Bangalore, Karnataka, which collaborates with the University of Manitoba on programs and research

for ethical clearance. The data collection only commenced after approval from University of Manitoba, Canada and St. John's Medical College, Bangalore, India was obtained.

During data collection, it was ensured that migrants were fully apprised of the study, were supportive of it, and were involved in data collection. To ensure community involvement in the study and to elicit their support, community consultations were conducted at the preparatory phase of the study. The objective, methodology, scope and rationale of the study were shared with community members during these consultations. This exercise also facilitated an interaction between community members and the principal researcher and was also helpful in identifying key members of the community. As the community consultations were held with different members in different places within the community, the field research team also gained first-hand experience of community life, knowledge of the geographical boundaries and layout of the community and major places such as temples and parks. This information became very helpful during the identification of sampled participants during data collection.

For the qualitative and quantitative components, data collection proceeded only after obtaining informed consent. All the participants were informed about the nature, intent and scope of the research. The participants were told about their right to participate voluntarily and the right to withdraw at any time. The data were collected in non-nominal format (i.e. without individual identifying information) using study code numbers. The migrant workers do not have any social or job security. They also do not have residential rights at the place of destination. Moreover, the study aimed to collect information on

intimate sexual attitudes and behaviours. Believing that migrants may be hesitant to sign any printed document which could put them in a situation of potential harm vis-à-vis local government authorities, the informed consent for this study was taken verbally from all the study participants. However, to ensure that consent was taken, the consent taking process took place in the presence of a neutral witness who signed the consent form on behalf of the participant. All the questionnaires used code in place of name. Each participant was paid Rupees 50 (approximately $ 1.50 Canadian) to compensate for his time and possible loss of daily wage because of his participation in the study (average minimum daily wage in India ranges from Rupees 50 to 100).

Completed questionnaires were handled with the utmost of care and sensitivity to ensure safety and confidentiality and to prevent unintended disclosure. At the end of each day, the completed questionnaires and interview and focus group discussion notes were handed over to the principal investigator. At the completion of the study and after data entry, the questionnaires were stored at Karnataka Health Promotion Trust storage facility in Bangalore, a partner of the University of Manitoba.

It is proposed that the analysis and results will be shared with key members of the community and will be open to view by all of the members of the migrant community.

Research Design

The study follows what could be called a 'deducto-inductive' method, a mix of deductive and inductive methods. A deductive method stipulates moving from general to particular while inductive from particular to general (Kline, 1998). In this study, the theoretical paradigms around migration, migration related risk for HIV and social capital led to formulating the framework for this study and generating the research questions (presented in Chapter 2). This was followed by data collection in the field. The analysis of these data helped to further enrich the understanding and explanations of the earlier paradigms around migration, social capital and HIV risk.

The study used a mixed methods research design comprising cross-sectional survey research and qualitative fieldwork. The mixed methods research design was chosen because on the one hand, it helped measure not only the quantity of social capital but also the quality (Harper, 2001; Baum and Ziersch, 2003); while on the other hand, it was also well suited to the investigation of the often hidden and stigmatizing behavioral and social factors underlying HIV epidemics (Poundstone et al. 2004). Mixed methods also helped in providing external validity to the data through triangulation (Fenton et al., 2001).Within mixed methods, a concurrent study design was employed and qualitative and quantitative data collection was undertaken simultaneously. Concurrent study designs helped to confirm, cross-validate, or corroborate findings within a single study.

Data Collection Instruments and Contents

a. Quantitative Survey:

The data on measures of migrants' sociodemographic characteristics, social capital and HIV risk was collected through a questionnaire which was administered to individual participants in the migrant communities of Kherwari (Mumbai) and Piplaz (Ahmedabad). The survey instrument was divided into three sections:

1. Questions on socio-demographic and migration characteristics;
2. Questions on social capital capturing bonding, bridging and linking domains of social capital; and
3. Questions dealing with participant's sexual behaviour including HIV risk.

The sequencing of the questions was strategically kept in this order so that participants faced questions on sociodemographic characteristics in the beginning, questions dealing with social capital in the middle, and sensitive and intimate questions on sexual behaviour in the end once rapport had been developed. Sequencing of the questions in this way was intended to increase the likelihood of getting correct responses for the questions on HIV risk (Fenton et al., 2001). Nineteen questions were on socio-demographic and migration characteristics, one question was on self-reported health status and 34 questions were on vulnerability and risk related to HIV. The social capital section had 75 questions. The section on social capital was based on several sources including: (a) Social Capital Assessment Tool (Krishna and Shrader, *Social Capital Initiative, Working paper No. 21*, World Bank, 2000), (b) Mignone's Social Capital

Measurement Tool (PhD Thesis, 2003), and (c) Social Capital –Integrated Questionnaire (Grootaert et al., 2004; The World Bank working paper; no. 18). The survey had 75 questions so as to capture different facets of migrants' social capital.

b. Qualitative Data Collection Tools:

Qualitative fieldwork was undertaken with the help of qualitative techniques such as in-depth Key Informant Interviews, Focus Group Discussions and ethnographic observations. The key informants included migrant men and local influential community members. The aim of the qualitative field work was to generate an overall community profile as well as deeper understanding of main themes in this study. It was done through focused interviews on themes which covered HIV vulnerability and risk profile of the migrant community, and sources and resources of social capital in the community including number and location of bars and alcohol shops, health clinics, religious centres, community meeting places, community based organizations, work/occupation based organizations etc. Themes covered in the focus group discussions and key informant interviews also included those related to community assets identification, prior experience of collective action, mechanisms available for conflict resolution, community governance and decision making patterns, and local organizations and networks. The qualitative field work was undertaken with the help of the 'Focus Group Discussion Guide' and 'Key-informant In-depth Interview Guide' developed for this study through an adaptation of the 'Community Profile Guide', developed and tested by Krishna and

Shrader (*Social capital Initiative, Working paper No. 21*, World Bank, 2000) to suit the objectives and context of this study.

In total, three instruments (the survey, focus group discussion guide and the key-informant in-depth interview guide) were used for data collection (Appendices No. 96 and 97). The survey instrument was developed in English and had to be translated into Hindi (the language of the participants) before pilot testing. Pilot testing of the questionnaires was undertaken among 50 respondents. The pilot testing was done in Kherwadi, the study site. The names of these people were removed from the sample frame before drawing the sample. Pilot-testing helped examine the feasibility of data collection (e.g., time, barriers, acceptability etc.) and the quality of the data (e.g., comprehensiveness in terms of choices offered to the participants for different items, clarity of questions and responses). Pilot testing also served the objectives of training the field researchers and refining the instruments. The qualitative fieldwork instruments were used to guide the group discussions/in-depth interviews which were undertaken by the principal investigator who is equally fluent in both English and Hindi; hence the qualitative instruments were not translated.

Sociodemographic, Social Capital and HIV Risk Measures

In this study, migrants' differential HIV risk has been understood in terms of its relations with migrants individual sociodemographic characteristics (e.g. age, income, marital status), migration characteristics (e.g. living and working conditions, duration of

migration, living with wife or alone) and social capital (nature and quality of relations with community members, host community members and services).

a. Migrants' Sociodemographic and Living and Working Conditions

On the basis of research findings and practical experience from interventions, it has been realized that the notion that 'risks were like votes and their simple total determines the outcome of the election (epidemic)' (Rothenberg et al., 1996) is not the correct one and that the contextual factors are important in understanding the risk and vulnerability to HIV (Parker et al., 2000, Aral et al., 2005). Poundstone et al. (2004) write that social epidemiologists examine how persons become exposed to risk or protective factors and under what social conditions, individual risk factors are related to disease. Social factors should be the focus of analysis. These factors should not be simply adjusted for as potentially confounding factors or used as proxies for unavailable individual-level data. It is necessary to study both the individual experience and the larger social matrix in which it is embedded in order to see how various social processes and events come to be translated in to personal distress and diseases (Farmer, 2005). Within social capital and health studies also, scholars have advocated testing for other possible contending influences (Portes, 1998; Turner, 1999; Cooper et al., 1999; Rose, 2000; Pilkington, 2002). Cooper and colleagues (1999) found that these other factors include an individual's age, gender, socio-economic circumstances and material living conditions.

Lurie and colleagues (2003) found that being a migrant, being under 35 years of age, having one or more casual partners, having symptoms of STIs in the last 4 months, and

never using a condom were important factors in determining risk to HIV. Brummer (2002), in a qualitative study to assess Basotho mineworkers' vulnerability to HIV, studied migrants work conditions, gender identity, sexual behaviour and HIV/AIDS. Migrants described their working conditions as hard, dangerous and unhealthy. The most difficult aspect of a migrant life was being away from family. They missed their wives, parents and children. Many mineworkers reported going to bars, brothels and gambling as there is no entertainment available in the all male hostels. Condom use was found to be low and self risk perception was almost negligible. Campbell and colleagues (2002) studied the role of casual partners, condom use with casual partners, and alcohol consumption to understand the relationship between social capital and HIV/AIDS. Poudel et al. (2003) in their study among returning migrants in Doti district of Nepal used a structured questionnaire which consisted of three parts: sexual experiences; socio-economic, demographic background, and information on migration; and perception and risk behaviours such as pre- or extramarital sex, number of sexual partners, sex with sex workers, condom use (always, sometimes or never) and its frequency.

In this study, information on migration characteristics was collected, as was information on marital status, nature of migration (single/married, with/without family), length of stay, occupation (skilled/unskilled) and the nature of employment (formal/informal). Migrants' social conditions were captured through an array questions such as staying away from wife/ family or not; loneliness (yes/no); feeling of helpless or not; lack of control and alienation or not; opportunities and avenues of social engagement and entertainment (present/absent); availability of sex work (easy/not easy); destination place

ensuring anonymity (yes/no); availability and accessibility of sexual health services such as STI, condom and educational and counseling services (good, fair, poor); level of awareness about risky and health promoting behaviour (very poor/poor/fair/high/very high); previous experience with sexually transmitted diseases (yes/no); self-risk perception (low/high); and alcohol consumption (regular, occasional, never).

b. Social Capital: Dimensions, measures and level of measurement

Kawachi and colleagues (2004), on the basis of an extensive review of studies in the field of social capital, write that there is still a lack of uniformity across studies in the choice of indicators to measure social capital. Most studies have used some combination of measures of trust, perceived reciprocity, and social participation, aggregated to the community or state level. However, other proxy measures have also been used, including volunteerism, community attachment, and even electoral participation. After analyzing various definitions (Coleman, 1990; Putnam et al., 1993; Putnam, 2000, Fukuyama, 1997; Lin, 2001), Islam and colleagues (2006) found the following 4 main theoretical ingredients in the somewhat overlapping definitions:

1. social trust/reciprocity;
2. collective efficacy,
3. participation in voluntary organizations; and
4. social integration for mutual benefit.

As discussed in Chapter 2, *Literature Review*, Putnam's construct of social capital has been dominant in epidemiology. Most studies have followed his measures also. Putnam's

measure of trust is derived from the U.S. General Social Survey (GSS) question: "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" Whereas his measure of civic engagement or participation in organizations is derived from the GSS questions related to group membership ("Now we would like to know something about the groups and organizations to which individuals belong. Here is a list of various organizations. Could you tell me whether or not you are a member of each type?"). Mignone (Ph.D. Thesis, 2003) writes that Kawachi and colleagues (1997) in their cross-sectional ecologic study of social capital, income inequality and mortality in 39 U.S. states, follow Putnam in the formulation of the social capital construct. The level of civic engagement is measured by the per capita number of groups and associations that residents belonged to in each state. The trust component of social capital is assessed from responses to two GSS items, similar to that of Putnam's. A more recent study (Kawachi et al., 1999a) used the same constructs and indicators. Hawe and Shiell (2000) write that influenced by Putnam, Kawachi's empirical work also has emphasized the relational rather than the material aspect of social capital. Szreter and Woolcock (2004) think that 'Putnam leans increasingly towards a relatively restricted definition of social capital as the nature and extent of networks and associated norms of reciprocity'. Another thing which is missing is 'respect' which as per Szreter (2002) precedes trust. Mignone (Ph.D. Thesis, 2003) writes that many other studies also used the same construct and data source (Kennedy et al., 1998; Wilkinson, Kawachi and Kennedy, 1998) or the same construct but different data sources (Veenstra, 1999).

As a result, bonding social capital has predominated so far in the measurement of social capital. Kawachi and colleagues (2004) observe that no study in their review has attempted to distinguish between bonding, bridging and linking social capital[12]. The communitarian view with bonding social capital as the sole measurement of social capital has held sway as far as the operationalization of social capital is concerned and is responsible for much of the criticism by Portes (2000) (for example, neglecting the possible downsides of social capital) and by Muntaner and colleagues (2001) in the political economy school of thought (for example, ignoring vertical power relations and state-society relations). It can be said that in the social epidemiology literature, the main indicators of social capital include trust, civic engagement and social networks. Norms, trust, and expectations of behavior are very broad ideas and identifying a commonly acceptable set of proxies for them has proved a formidable task and many different variables have been used in different studies.

Many studies have used simple indicators such as a single question on membership of voluntary associations as a proxy for social engagement or a single question on trust in other people. Moreover, various studies using trust as an indicator have shown different results. For example, in a famous study (based on secondary data and single item indicator of trust), Knack and Keefer (1997) found evidence in 29 market economies of an association between higher trust and civic norms and superior economic performance as measured by higher and more equal incomes. La Porta and colleagues (1997) found trust to be only weakly associated with economic growth. Helliwell (1996) found a

[12] Only one study [Mignone, Ph.D. Thesis] so far has studied the social capital in all its three dimensions.

negative effect of trust on economic growth in 17 Asian countries and no impact on economic development in the United States and Canada.

In social capital literature, there are several suggestions to improve the measurement of social capital. van Deth (2003) suggests that to correct this problem i.e. using single question to measure social capital, multiple-item measurement should replace the use of single-item in the measurement of specific components of social capital. On the basis of a cross-national comparative study, Kennelly and colleagues (2003) suggest that trust as an indicator may be useful at a small group level but not at the broader level. Grix (2001) writes that trust, which according to Putnam is an essential component of social capital, is a multifaceted concept that, for clarity, is best divided into several sub-groups so as to make their operationalization feasible. The subgroups are interpersonal trust, trust in institutions, generalized trust, horizontal trust and vertical trust. Stone (2001) advises a social capital researcher:

1. To recognize that social capital is a multidimensional concept comprising social networks, norms of trust, and norms of reciprocity;
2. To understand that each of these dimensions must be measured in a comprehensive and valid investigation of social capital;
3. To appreciate that social capital is a source to action (and not outcome); and
4. To empirically distinguish between social capital and its outcomes.

Grix (2001) writes that no distinction is made between types of clubs or associations and their different effects on an individual's sense of 'civic-ness'. Grix states that

participation in civic organizations inculcates skills of co-operation as well as a sense of shared responsibility for collective endeavors. Grix asks what kind of civic virtues are learnt in a bird watching society. Only quantity is measured and not the content and quality of relationships. Another important fact about networks and participation in the networks in the context of migration could be that the formation of social ties takes time, yet because migrants tend to move frequently; these households/individuals tend not to be involved with organizations (Sampson et al. 1997), which in turn makes them less socially connected[13]. Similarly, in their study on social capital and hunger, Martin and colleagues (2004) found low social capital among Hispanic households because of frequent mobility. Lindstrom (2004) writes that social capital and aspects of social capital such as social participation/social networks and trust are best promoted by stable social conditions such as stable social structures and low migration rates.

Apart from frequent mobility as a reason, it has to be kept in mind that the working class, especially those at the lowest rung of the economy, may not have time/ opportunity/capacity to join any such group. Migrant workers in Mumbai work every day starting at six am when they stand at the *naka-mandi* (job market) to be picked up by the contractors and they return back at eight pm. Expecting such population groups to join voluntary organizations is unfair. Therefore, it is necessary to look for other parameters to measure the sociability/civic engagement.

[13] As quoted in, Martin, K.S., Rogers, B.L., Cook, J.T., Joseph, H.M., 'Social capital is associated with decreased risk of hunger', Social Science & Medicine 58 (2004) 2645-2654, p. 2653

Following Szreter and Woolcock' s comprehensive construct of social capital, the survey instrument for this study included questions on bonding, bridging and linking social capital. Each domain of social capital was captured through an array of questions on trust, reciprocity, approaching for help and participation in community or other civic activities. Bonding social capital has been measured in terms of participant's membership in the within-community networks and level of participation in different formal (Community Based Organization such as Community Association, Festival Organizing Committee etc.) and informal groups (Friend/Card Playing Group), and trust and norm of reciprocity among the members in those networks. Bridging social capital has been be measured in terms of participant's membership in the inter-community networks, level of participation and involvement in different formal (Workers' Union, Trade Union, City Based Social Organization, Migrants' Welfare Programmes etc.) and informal groups (Friend/Card Playing Group), and trust and norms of reciprocity among members in those networks. Linking social capital measures include migrant's relations with the government agencies/departments, employers, NGOs and health service providers. It has been measured through questions on relations with service providers and organizations including local NGOs, health clinics, municipality departments; perceptions on how they rate their experience (level of comforts. confidence and trust) in social interactions with these organizations and personnel involved with these organizations.

There are many studies which have found Putnam's indicators of 'generalized trust' and memberships in voluntary organizations difficult to find in marginalized communities (Higgins, 1999; Campbell, 2001; Grix, 2001; van Deth, 2003). To account for that, items

on ‘personalized trust in the form of face-to-face relations’ and ‘membership’ in formal and informal groups have been included in the research protocol. Universal measures of social capital included in the survey instrument comprise a general feeling of community life, a general feeling of life in the city; connectedness to the society at large; generalized trust and reciprocity; voting behaviour; and participation in political processes such as demonstrations and petition signing.

c. Risk Measures

There is, more or less, unanimity on what constitutes ‘risk’ behaviour in regard to HIV transmission. Risk factors commonly measured include knowledge, attitudes, and behaviours (Caceres, 2000); and numbers of sexual partners, the frequency of different sexual practices and previous experience with other sexually transmitted diseases (Parker et al., 2000). UNAIDS has proposed the numbers and types of sexual partners, condom use, age at first sex, commercial sex and age mixing in sexual relationships as the global indicators of risk behaviour (Slaymaker, 2004). In India, various studies have found lack of knowledge, visiting sex workers, low use of condoms, pre-and/or extra-marital sex, multiple casual partners, presence of other sexually transmitted infections, peer pressure, alcohol consumption, single life and low risk perception as important risk factors (Rao et al., 1994; Savara and Sridhar, 1994; Weiss and Hawkes, 2002; Poudel, 2003).

In this study, three measures have been used as the outcome variables to denote HIV risk: having casual partners in the city in the last 12 months (yes/no); having had sex with a

commercial sex worker in city in last 12 months (yes/no); and no or inconsistent condom use with sex worker (yes/no). The three variables were chosen to reflect the HIV risk behavior among migrant workers because on the one hand, they capture the essential information about the presence or absence of HIV risk in migrants and on the other hand, these measures have been used extensively in HIV/AIDS research globally (Caceres, 2000; Wellings and Cleland, 2001; Weiss and Hawkes, 2002; Slaymaker, 2004, Cleland, 2004) and in India (Shepherd et al., 2003; Lalou and Piche, 2004; Godbole and Mehendale, 2005; Schneider et Al., 2007). Sex with a sex worker and condom use with a sex worker have been included in addition to having casual partners. Various studies have stressed this factor because of the higher risk involved owing to higher STI and HIV prevalence among sex workers as well as the open nature of sexual networks (for Uganda, Decosas et al., 1995; for Kenya, Brockerhoff and Biddlecom, 1999; for India, Bentley et al., 1998). The questionnaire has a minimum of questions of *frequency reports* and more on *incidence reports* such as having a casual partner, sex with sex workers, and condom use because recall has been found better for the latter (Fenton et al., 2001). Risk measures have been defined in very simple terms (e.g. yes/no) because this has been found to control for misreporting and recall bias (Brockerhoff and Biddlecom, 1999).

Research Team and Field Management

The fieldwork, data collection and analysis were undertaken by the Principal Investigator who was assisted by locally hired and trained field researchers. Two teams of local researchers were hired (one for Mumbai and one for Ahmedabad). Each team had one research coordinator and ten researchers. In Mumbai, all the researchers were male while the coordinator was female. In Ahmedabad, the research coordinator was male and the field team had equal number of male and female researchers. All the researchers were hired on the basis of their previous experience in conducting community based health research. The researchers were trained for the purpose of this study. Different sessions covered the objective, procedure and methods of data collection under this study (both quantitative survey and qualitative); the do's and don'ts of community-based research; recruiting the participants; and discussing the sensitive issues like sex, sexuality and high risk behaviour. The Survey Questionnaire and Qualitative Fieldwork Instrument Guide were discussed in detail so that all researchers were fully comfortable in administering the survey. They were also familiarized with the ethics of research.

Administering the Questionnaires and Qualitative Field Work

The data were collected from January to June 2007, using mixed methods. Data collection methods comprised of a cross-sectional survey, focus groups discussions and key informant interviews. The quantitative data were collected from a proportionate stratified sample. Quantitative data were collected from 1598 migrants through survey

methods (804 in Mumbai and 794 in Ahmedabad). In total, 9 focus group discussions involving 73 participants and 17 in-depth interviews were undertaken.

The structured questionnaires were administered to participants in a one-on-one situation and participants' responses were filled-in by the field researchers after obtaining informed consent from the study participants. The questionnaire administration took approximately one to one-and-a half hours. The place for completing the questionnaire was chosen in a way so as to ensure privacy to the study participants and un-interrupted administration of the questionnaire. Generally, the questionnaires were completed in migrants' residential units.

The principal investigator was at the site for supportive supervision of the research team. The qualitative field work was undertaken by the principal investigator. The focus discussion groups were strategically formed so as to capture information and perceptions across a wide spectrum such as different age-groups, different durations of stay and different levels of income/occupation hierarchy. At each group discussion, three researchers were present, one moderator (principle investigator) and two for note taking. One note-taker was responsible to take the notes of the discussion while the other note-taker wrote down the group dynamics including those who were leading the discussion, undercurrents of power relations in the group, and the common themes. The sites for group discussions and in-depth interviews were chosen as per the choice and comfort of the participants.

Quantitative Data Preparation

Data were coded and entered into Microsoft Excel spreadsheets using these codes. The data were checked for completeness and accuracy and cleaned to check for missing values for some responses. To ensure that all the data were entered correctly and completely, all the entries were double-checked. After cleaning, the data were exported to SPSS software program for further analysis. The data set has coded entries for all the study participants in Mumbai and Ahmedabad in one data set. The city-specific analysis was done using a split-file statistical technique.

The socio-demographic and migration characteristics data are mostly categorical (e.g. marital status (married/not married) or ordinal (e.g. age; income; education). Similarly data for risk measures are categorical, mostly in the yes/no format. Data for social capital measures is mostly ordinal as most of the questions follow a Likert-like 5-point scale (e.g. trust to a great extent; to a great extent; neither great nor less; to a less extent; to a lot less extent). However, some data (e.g. membership in association or groups) are categorical (which will have yes/no options).

Component analysis for social capital

In total, 75 questions were used to measure components of the bonding, bridging and linking domains of social capital. Exploratory factor analysis was employed to determine the components of each domain and items under each component, and to test for

reliability and internal consistency for the social capital measures. The analysis was done on the cumulative data set to ensure the same measures were applicable in both the communities. Similarly, after obtaining the factor-scores for all study participants for components and domains of social capital, the cumulative data set was used to find the 33.3 percent and 66.6 percent cut-off points to create tertiles of low, medium and high levels of social capital.. Table 3 shows the final components of the bonding, bridging and linking social capital. All the components of social capital contribute to their respective domain and to the overall social capital of migrants in Mumbai and Ahmedabad.

a. Bonding social capital

Appendix 1 presents the overall items before starting factor analysis; factors and items after the first step and factors and items after the final round of factor analysis. In total, 10 questions went out in subsequent rounds of factor analysis. The factor analysis produced 7 factors in the first step of analysis. These 7 factors had 21 items. Two items on membership ('*Membership in an organization or group*' and '*Level of participation in that group or organization'*), 2 items on friendship ('*People you live with are your friends*', '*Your neighbors are your friends*'), and 2 items on differences ('*There are differences among the community members on religious line*', '*There is difference between old and young migrants*') went out. Second round of analysis was done with the remaining items and resulted into one item on interaction ('*I interact with only my community members'*) going out of the analysis. That left 20 items in the analysis. Third round of analysis produced 5 factors with 20 items. The final 5 factors after 3 round of

factor analysis were: Differences in the community members; Personalized trust and help; Generalized trust in community members and help; Communitarian sense; Negative trust in community members. When subsequent analysis produced the same 5 factors and 20 items; further factor analysis was not done. Next, all the 5 factors were tested for reliability. To test for reliability of items in each of the 5 scales, Cronbach's Alpha tests were undertaken. This resulted into discarding of 1 factor. Factor '*Negative trust in community members*' had Cronbach's Alpha value of .479 (< than .60). It was decided to discard this factor and 3 items under it. As a result of this, 4 factors remained in the final list with 17 items. Factor '*Differences in community members*' has Cronbach's Alpha value of .799; Factor '*Personalized trust in community members and approaching for help*' has Cronbach's Alpha value of .730 and Factor '*Generalized trust in community members and approaching for help'* has Cronbach's Alpha=.630. Factor 'Communitarian sense' has Cronbach's Alpha value of .555. This value is below the cut off value of .60. It was decided to keep this factor in the analysis. It was done because: firstly, it is marginally lower than .60; and secondly it is an important factor as it accounts for communitarian sense in the community reflecting helping behavior and reciprocity. The 4 factors with 17 items account for 53.008% of the variance in the data and have an overall Cronbach's Alpha value of .736. Both these statistics indicate a consistent and reliable measure of bonding social capital.

Bonding social capital measures intra-community ties, level of trust and participation in community activities, and has 4 components: '*Differences in community members*'; '*Personalized trust and help*'; '*Communitarian sense*'; and '*Generalized trust*'. The first

component ‘differences in community members’ measures the sense of differences that an individual migrant attributes among community members. A high sense of differences in community members in terms of education, material possessions and social status will result in low bonding social capital of a migrant. The second component ‘personalized trust and help’ measures relations of an individual migrant with employers and contractors and shopkeepers and whether this relationship extends to seeking help or not. A person who has high trust in employers, contractors and shopkeepers as well as approach them for help will have high bonding social capital. The third component ‘communitarian sense’ measures a migrant’s contribution towards community and level of trust over period in community members. A migrant who contributes to community project or helps solve community problem, and who thinks that community trust has become better over the years will have higher bonding social capital than a migrant whose contribution in community activities is lower or who thinks that the overall trust in community has gone down. The fourth component ‘generalized trust’ measures the level of trust an individual migrant has in community members. If a migrant trusts most people in the community, approaches them for help and is hopeful of getting help in times of need, he will have higher bonding social capital than a person who trusts none or very few members of the community and who does not seek help or is not hopeful of getting help from community members. Overall, it can be inferred that a person who has a low perceived sense of differences in community, high trust in community members in general, and employers/contractors in particular and approaches them for help, and participates regularly in community work, he will have high bonding social capital.

b. Bridging social capital

The first step of factor analysis produced 6 factors with 26 items (Appendix 8). However, one factor had only two items ('*Membership in an organization or group*', and '*Level of participation in that group or organization*') and was removed from the list of the items when second round of factor analysis was run. Second round of factor analysis was done with 24 items. This round also had one factor with only two items ('*One has to be alert in neighborhood*', '*One has to be alert in the city*'). Third round was run with 22 items and produced 6 factors. However again, one factor had two items ('*In city, people are interested in their welfare*', '*In city, people don't trust in matter of lending and borrowing*'. In addition, two items under participation ('*Made a donation*'; '*Contacted radio, TV or newspaper about your community's problem*') were coming in two factors. In the next round analysis, all these 4 items were removed. In this round, two questions each on '*generally people will return lost and found things in neighborhood and city*' and on '*friends*' went out. Still some items were coming in more than one factor. At this stage, it was decided to run the analysis with 3 factors. In the final analysis, bridging social capital had three factors with 15 items. These factors and items explain 50.119 % of the variance. The Cronbach's Alpha for the overall bridging social capital is .741. It indicates that the overall construct of bridging social capital has high internal consistency and that the factors and items form a good measure of bridging social capital. Individually, each factor has Cronbach's Alpha value of more than .60. Factor '*Participation*' has Cronbach's Alpha of .785; factor '*Generalized trust (neighborhood)*'

has Cronbach's Alpha value of .701; and factor '*Generalized trust and help'* has Cronbach's Alpha value of .719.

Bridging social capital measures migrants' relations with local people and migrants from other states, and is constituted by three components: '*Personalized trust and help*'; '*Participation in bridging kind of activities*'; and '*Generalized trust in neighborhood*'. Component 'personalized trust' measures the level of trust a migrant has in local people in Kherwadi and Piplaz, city people and other migrants, and the trust he has in approaching others for help. Component 'participation' measures migrant respondent's participation in activities, groups, or associations that brings him in contact with local people from city or migrants from other states. Component 'generalized trust in neighborhood' measures the level of integration of migrants in the immediate local community in terms of whether relations with the local people in Kherwadi and Piplaz are trusting and reciprocal in nature or lacking in trust and dominated by self-interest.

c. Linking Social Capital

In the questionnaire, linking social capital was measured with 22 items (Appendix 15). The first set of factor analysis produced 6 factors with 22 items but one factor had only two items in it ('*Access to health services*' and '*Access to water and sanitation services*'). These items were removed in the second round of analysis. Round 2 of the factor analysis was run with 20 items. One factor had only 2 items with significant correlation coefficient value (>.40). These two items were '*Membership in a group/organization*'

and '*Level of participation in that group/organization'*. Both these items were removed for the third round of factor analysis. The third round was run with 18 items. At round 3, one factor had two items that had correlation coefficient more than .40. One item '*I have friends in government/non-governmental organizations*' was removed from the further analysis. The other item '*Approach government authorities for help*' was also part of another factor so it was retained. Fourth round of factor analysis was run with 17 items. All the 17 items remained under 4 factors.

Factor one on 'Personalized Trust in Services' has 6 items; factor 2 on 'Participation' in linking activities has 4 items; factor 'Links with Services' has 5 items; and factor 'Reciprocal Trust from Services' has two items. The last factor has only two items. Ideally, it should have been removed from the analysis as it has only two items. However, it has been decided to keep this factor as it captures an important aspect of linking social capital i.e. reciprocity in trust with service providers. Woolcock writes that it is not only important to have access to services but how service providers treat people is equally important as a measure of social capital. The reliability tests (Cronbach's Alpha) helped in determining the final scales. In the final analysis, all the 4 factors remained with 17 items. The final scale is a good measure of linking social capital among migrants as it explains 54.288 % of the variance and has high reliability (overall Cronbach's Alpha = .775). All the 4 scales have high reliability. Factor '*Personalized Trust in Services*' has Cronbach's Alpha value of .782; factor '*Participation*' has Cronbach's Alpha value of .715; factor 'Access to *Services'* has Cronbach's Alpha value of .672; and '*Reciprocal Trusting relations with services*' has Cronbach's Alpha value of .617.

Linking social capital measures the levels of engagement with government services, authorities and involvement in activities that connect him with authorities, and has 4 components: '*Personalized trust in services and approaching them for help*' such as local government officials, police, doctors and nongovernmental organizations; '*Participation in linking kinds of activities*' including campaigning and voting in election, contacting some influential person or elected representative; '*access to services*' for job training/information, loan and health services; and '*reciprocal trusting relations with services*'. Components of linking social capital measure nature and content of relations with services and influential persons and access to services and authorities. Participation in activities that link a migrant with higher ups also contributes to linking social capital.

Table 3: Social Capital Framework based on Factor Analysis & Reliability Tests

Bonding Social Capital	Bridging Social Capital	Linking Social Capital
Factor 1: Differences in Community Members 1. Differences in education level 2. Differences in wealth/material possessions 3. Differences in social status 4. Differences between older and new generation migrants 5. Differences in political party affiliations 6. Differences in caste background **Factor 2: Personalized Trust & Help** 1. Trust in employers / contactors 2. Trust shopkeepers 3. Approach employers / contactors for help **Factor 3:Communitarian Sense** 1. Can count on friends/community members to take care of belongings if I have to go somewhere 2. Contribute to a community project 3. Contribute to solve a community problem 4. Since the time you have been here, the trust in community has become better or become worse **Factor 4: Generalized Trust & Help** 1. Most people in this community can be trusted 2. Most people in this community are willing to help if you need it 3. Trust people from own community 4. Approach community members for help	**Factor 1: Personalized Trust & Help** 1. Most people in city can be trusted 2. Most in city willing to help 3. Trust local people from the city 4. Trust in migrants from other states 5. Approach local people from Kherwari when in need or for some kind of support **6.** Approach migrants from other states when in need **7.** I have friends in other migrant communities **Factor 2: Participation** 1. Participated in an association 2. Participated in an information campaign for migrants' welfare 3. Personally taken part in a sit-in or dharna 4. Volunteered for a charitable/community organization **Factor 2: Generalized Trust (Neighborhood)** 1. Most in neighborhood can be trusted 2. Most in neighborhood willing to help if you need it 3. In this neighborhood, people generally do not trust each other in matters of lending and borrowing money 4. In neighborhood, people are only interested in their own welfare	**Factor 1: Personalized Trust in Services and Approach for Help** 1. local govt. officials 2. Trust police 3. Trust govt. health depts. / hospitals 4. Trust doctors 5. Trust NGOs 6. Approach govt. authorities for help **Factor 2: Participation** 1. Voted in election 2. Made contact with an influential person 3. Participated in election campaign **4.** Contacted your elected representative **Factor 3: Access to Govt. Services** 1. Do you have access to the services of job training/employment 2. Do you have access to the services of credit/finance 3. Do you have access to the services of Justice/conflict resolution 4. Access to STI/HIV services 5. How do you rate your experience with government services in your community **Factor 4: Reciprocal Trusting Relation with Services** 1. Banks lend money to business people in our community (e.g., contractors, shopkeepers etc.) 2. Hospital/nursing station/health centre authorities listen to people in our community
Items= 17	**Items=** 15	**Items=** 17
Total Variance explained= 53.008	**Total Variance explained=** 50.119	**Total Variance explained=** 54.288
Overall Reliability= .736	**Overall Reliability=** .741	**Overall Reliability=** .775

Data Analysis

1. Quantitative Analysis: Descriptive, Bivariate and Multivariate Analyses

SPSS software program version 16.0 was used for statistical analyses.

The overall goal of this study was to explore the relationship between migration and HIV risk. To meet this goal, the study identified four objectives: (1) describing the population characteristics; (2) describing the sexual risk behaviours of migrants in Mumbai and Ahmedabad; (3) understanding the relationship between migrants' social conditions and HIV risk; (4) understanding the relationship between migrants' HIV risk and social capital.

To meet objective 1, descriptive statistics were undertaken to understand the raw number and percentages for migrants' sociodemographic characteristics in Kherwadi, Mumbai and Piplaz, Ahmedabad. Descriptive statistics and graphs help in understanding the sociodemographic characteristics, living and working conditions.

Before testing for the relationship between HIV risk and sociodemographic characteristics, and between HIV risk and social capital, descriptive analysis was undertaken to understand HIV risk among migrants in the two study sites. Descriptive statistics were undertaken for the three HIV risk measures. The literature on migration and HIV/AIDS suggests that migration leads to high risk behaviour. Analysis was

undertaken to test for this relationship in the context of this study. The data on high risk behavior at origin and destination place was collected through a set of similar questions: '*have you ever had sex with sex worker when you were in your village*' and '*have you had sex with a sex worker here in city in last 12 months*'. Chi-Square and McNemar tests were undertaken. Chi-square test tells the differences in two samples, and was undertaken to test for whether there is statistically significant difference in risk behavior in village and city. McNemar statistics tests for difference at individual level for the same individual at two locations and was used to test for whether these are the same individuals who are having risk behavior at both the locations or different individuals who have high risk behavior in two locations.

To understand the relationship of the risk measures (outcome variables) with socio-demographic variables, bivariate and multivariate analyses were undertaken. Cross-tabulation gave the numbers and percentages in each risk category along with the Chi-Square values. Chi-Square values helped in deciding whether the relationship is significant or not. Logistic regression statistical procedures were run with significant variables one by one. The 'Enter' regression procedure was used and all the sociodemographic variables were treated as categorical for this analysis. This analysis was done to get the odds ratios for risk for each sub-category of the sociodemographic measures. Finally, logistic regression with 'backward stepwise conditional' statistical procedure was run to test for association of socio-demographic variables with each of the outcome risk variable. The variables were tested for possible presence of interaction using univariate GLM statistical technique. The regression models were run for all the

sociodemographic terms and interaction terms. Wherever interactions terms were significant and the original terms dropped out of the model, another round of regression analysis was run with 'Enter' method to force those terms to remain in the model. The final logistic regression models have been compiled in table form for each of outcome variable at the end of the chapter. All the regression models have been put in appendix for a quick look-in, in case required. All models marked with (II) in title mean that the interacting terms were added and 'Enter' procedure was used to retain the interacting terms in the model. Absence of (II) means that either the interaction was not significant in the final model or interaction terms as well as original terms remained in the model on their own.

Similarly, bivariate analysis for one-to-one relations and logistic regression for unique effects of the explanatory variables were undertaken to test for relation of HIV risk measures with social capital. Analyses were undertaken for domains and components of social capital for the two study sites. In the multivariate analyses, two models were run. Model I was run only with social capital (either domains or components) measures only while model II was run with social capital measures and sociodemographic measures. The model II was run to test for whether social capital will remain in the statistical model when the analysis is controlled for sociodemographic characteristics.

2. Qualitative Analysis

Qualitative data were in the form of field notes taken during the key-informants' interviews and focus group discussions. As a first step, the entire set of field notes were typed verbatim and separately for each session. Each typed note was marked with identifiers such as key-informant type, name of interviewer, date and place of interview. Typing of the field notes and initial analysis of the data was started during the time of the fieldwork. This helped in improving the data collection efforts in subsequent sessions, as part of an iterative process.

The more systematic analysis was done once the fieldwork was completed. The analysis was done manually. Each manuscript was read carefully and a general sense of the information and overall meaning was obtained. Notes were written on the margins of the manuscripts so as to start categorization of the data. Initial broad categories for coding came from the three main themes of the study (i.e. sociodemographic characteristics, social capital and HIV risk). Further analyses identified major themes within and beyond the main ones through a coding system that ranked the themes and related text as per logical relevance to the study. These themes were labeled with an *in vivo* term, used by participants in the discussions (Creswell, 2003). A list of all the topics or themes was compiled which helped in bringing similar themes together. These themes were coded. A code was a term given to similar data such as having sex with sex workers, alcohol consumption, community support, norms of reciprocity, and bonding social capital. The whole data was read again against this list of themes/codes and was recoded. This

rereading helped in identifying new categories or themes, not already identified in the initial analysis. This, also, helped in identifying divergent views.

As the next stage of the analysis, the triangulation of data from focus group discussions and key-informant interviews was undertaken. This led to the identification of interrelationships between major themes. The interrelationships could be positive or negative, depending on whether findings from the discussion were similar or differed from the findings from in-depth interviews. For a meaningful and comprehensive picture of community life and its processes, HIV risk scenarios, forms of social capitals as well as descriptions of the social and physical setting, community life, social processes, and community assets, the data were analyzed by themes and across themes, completing the qualitative portion of this study.

3. Final Analysis and Discussion

The results from the quantitative survey were analyzed in the light of findings from the qualitative data. This triangulation helped to confirm, cross-validate, and corroborate findings from the quantitative survey method in a more holistic way. The findings from the quantitative and qualitative data have been brought together in the chapter on results (Chapter 4). The study findings were discussed in details in the backdrop of the study objectives, existing evidence and the study framework to delineate the research, programmatic and policy implications (Chapter 5).

CHAPTER 4

Results

The chapter presents the results for this study and has been organized into three sections. The first section describes the study population in terms of its sociodemographic characteristics, living and working conditions, and social capital. The second section explores migrants' HIV risk scenario at the destination places and tries to answer the question as to whether there is an increased risk in migrants at the destination place or if the risk behaviour is merely a continuation of risk from the villages to the city and there is thus no increment in HIV risk in migrants at the destination place. The third section presents the results of bivariate and multivariate analyses of the relationship HIV risk has with migrants' sociodemographic characteristics and social capital, respectively. The chapter ends with a summary of main results.

Section I: Understanding the Population Characteristics

I.A. The Study Sites and Population

The qualitative data show that there were approximately 4000-4500 migrant workers from Rajasthan in Kherwadi and Piplaz each. Migrants at the two study sites were from the Shekhawati area in Rajasthan. The districts of Churu, Sikar and Jhunjhunu in northern Rajasthan are jointly called 'Shekhawati'. Various push and pull factors were reported to be behind migration from Rajasthan villages to Mumbai and Ahmedabad. These factors

included a paucity of job opportunities in villages, lower wages in villages, established migration channels between villages of Rajasthan and Mumbai, family member/relative/villager already working in the city etc. Job opportunities in Shekhawati region of Rajasthan are limited, especially if it does not rain given that agriculture is the mainstay of rural life and agriculture is rain dependent. It is considered normal and natural in villages of Rajasthan that an adult man will leave the village and go to other areas for work to support his family. Migrants visit villages 2-3 times in a year. Most people go to villages on Diwali and Holi, two major festivals in Rajasthan. Those men who were married went home more often than unmarried men. Migrants availed no social protection service from the government. Employers also did not provide any social protection or health insurance service. The migrant community had no community gathering place for social functions. The community also did not have any union, association or formally elected leader.

Kherwadi, a small locality with quasi-legal status as a residential colony, is in the southern part of Mumbai and is located near *Bandra* railway station. Kherwadi is named after Mr. B.G. Kher, first Premier of Bombay who after independence helped migrants settle in this area. Houses belong to the Rajasthani people who migrated to Mumbai in the 1950s and were the initial settlers in this area. Migration here followed the pattern of 'chain migration'. Earlier migrants helped new ones in the process of migration including finding a residence and a job. It was common to find people from the same extended family or village living together or in nearby houses. People from different castes lived here but members of the *khatik* community were in the majority. House owners/landlords

were also mostly *khatik*. Most migrants in Kherwadi were involved in the construction sector. Migrants could be divided into two main professional groups: *Kadiyas* (construction workers) and Carpenters. The majority of the migrants worked as *kadiyas* (construction workers). Migrants worked on a daily wage basis and on a contract basis. Those migrants who were not attached with contractors, in fact a majority of migrants in Kherwadi, gathered at *naka* (labor point) every morning from 5 to 6 a.m. onwards and waited to be hired. Some migrants who had been in the city for a long time had become contractors. The main problems in Kherwadi were a lack of quality health services, crowded living conditions (six to seven people, sometimes even ten people, lived in one room which most migrants reported as problematic) and a lack of work regularity. Main sicknesses in the area included common cold (flu), fever (mainly malaria), breathing problems, tuberculosis and diarrhea. The study participants reported that migrants fell sick very often. They took treatments either directly from the pharmacy or consulted a private doctor in the locality. There were four private doctors in Kherwadi. There was a government health facility but migrants don't get/avail services there.

The second study site Piplaz is a small village, approximately ten kilometers from Ahmedabad, the state capital of Gujarat. Piplaz is situated on the Bombay-Ahmedabad road, and is an industrial area. There are clothes and synthetic fabric factories here. The owners of these factories are from Shekhawati in Rajasthan, the same region where most migrants come from. The qualitative data analysis shows that most migrants came to Piplaz through labour contractors and friends. The factory owners gave responsibility of hiring and managing labour to labour contactors. Most of the hotels, *dhabas* (food joints)

and grocery stores belonged to Rajasthani people. The main motivations behind coming to Piplaz comprised better job opportunities and higher earnings. *Brahman*, *harijan*, *jat*, *prajapat*-people from different castes lived here as migrants. Migrant workers worked a shift of twelve hours. Most worked as contract laborers; however, the employment was regular in nature. Migrants' wages amounted to 90-160 rupees per day. Migrants received occasional free health checkups in factories. Houses belonged to local Gujarati people of *Bharwad* and *Dakor* communities. The living places were ten by ten feet. Most living rooms had no facilities such as bathroom, latrine etc. Migrants did not have a ration card or an election card. The streets were not *pakka* (concretized) and were not lighted. Being situated outside the main city, Piplaz was not very well connected with transportation facilities. Main health problems here included fever, stomach ache, common cold, tuberculosis, malaria, STD/HIV, diarrhea, jaundice and skin diseases. There was no government health facility in Piplaz. One private doctor had his one-room clinic in Piplaz. Migrants also accessed health services from private doctors in Isanpur (the nearest point in the city) for treatment. There was a medical shop in Piplaz. Mostly, people bought medicine from this shop directly without consulting a doctor.

I.B. Sociodemographic Characteristics

Migration to the two study sites in Mumbai and Ahmedabad originated largely from a similar socio-economic milieu. Most migrants came from villages in Churu, Sikar and Jhunjhunu districts of Rajasthan, an area jointly called 'Shekhawati'. Migrants in the two cities shared some similarities. Most migrants were male and most migrants migrated without families. All of them worked in the informal sector. Most migrants lived as

tenants. Living and working conditions in both the cities were tough. Migrants were mainly in the age group of 18-35 years. Both places had 'chain' migration. Earlier migrants helped new migrants in moving to cities. People came to the city through their friends, relatives or villagers.

However, there were substantive differences also: between migrants in the two cities and within migrants in the same city. Table 4 shows that Kherwadi in Mumbai had more people in the higher age category, with longer duration of migration, higher income and more fluctuation in income. In Mumbai, people had more education and more people were married. Piplaz in Ahmedabad, on the other hand, had more migrants who were younger and unmarried, lived with their wives as compared to Mumbai, had permanent or regular jobs, had more workdays in a month and monthly salary payment.

Table 4 shows the descriptive characteristics of the study population in Kherwadi, Mumbai and Piplaz, Ahmedabad. In Ahmedabad, 96.3 percent were below the age of 35 years as compared to 86 percent in Mumbai. More migrants in the overall sample were below the age of 25 years. Younger than 25 years of age migrants constituted 46.6 percent of migrants in Mumbai and 70.2 percent in Ahmedabad. The qualitative analysis shows that people went back to their villages after they were 45 or 50 years old. In Mumbai, a concurrent-replacement form of migration was prevalent. More often than not, a son or younger brother joined his father or older brother and established him in the profession. At this time, the older members of the family returned back to the village. Migration to Ahmedabad was a recent phenomenon compared to Mumbai, so this migrant replacement system was not there.

Table 4: Sociodemographic and Migration Characteristics

	Mumbai N=804 (%)	Ahmedabad N=794 (%)	Overall N=1598 (%)
Age			
<25 years	375 (46.6)	557 (70.2)	932 (58.3)
25-35 years	315 (39.2)	207 (26.1)	522 (32.7)
>35 years	114 (14.3)	30 (3.8)	144 (9.0)
Education			
>10 stds	141 (17.5)	130 (16.4)	271 (17.0)
>5 but <10 stds	455 (56.2)	373 (47.0)	828 (51.8)
<5 or =5 stds	152 (18.9)	237 (29.8)	389 (24.3)
Illiterate/Never went to school	56 (7.0)	54 (6.8)	110 (6.9)
Marital status			
Married	548 (68.2)	365 (46.0)	913 (57.1)
Separated/Divorced/Never married	256 (31.8)	429 (54.0)	685 (42.9)
Staying alone or with wife			
With wife or wife comes and stays	71 (8.8)	119 (15.0)	190 (11.9)
Without wife or unmarried	733 (91.2)	675 (85.0)	1408 (88.1)
Duration of migration			
>Or + 1 year	139 (17.3)	215 (27.1)	354 (22.1)
>1 and up to 5 years	283(35.2)	425 (53.6)	708 (44.3)
>5 years	382 (47.5)	154 (19.3)	536 (33.5)
Average income			
<3000	227 (28.2)	209 (26.3)	436 (27.3)
3000-5000	401 (49.4)	484 (61.0)	885 (55.4)
>5000	176 (21.9)	101 (12.7)	277 (17.3)
Income same every month or fluctuates			
Same every month	81 (10.1)	385 (48.5)	466 (29.2)
Fluctuates	723 (89.9)	409 (51.5)	1132 (70.8)
Mode of payment			
Daily/Weekly/Job based	513 (63.8)	90 (11.3)	603 (37.7)
Monthly/Lump sum contract based	291 (36.2)	704 (88.7)	995 (62.3)
Job nature			
Permanent/Regular	77 (9.6)	380 (47.9)	457 (28.6)
Long contract	34 (4.2)	206 (25.9)	240 (15.0)
Daily wage	693 (86.2)	208 (26.2)	901 (56.4)
No. of days work in a month			
<10 days	12 (1.5)	2 (.3)	14 (.9)
10-20 days	331 (41.2)	58 (7.3)	389 (24.3)
20-30 days	461 (57.3)	734 (92.4)	1195 (74.8)
Place own or rented			
Own	57 (7.1)	13 (1.6)	70 (4.4)
Rented/Free	747 (92.9)	781 (98.4)	1528 (95.6)
Living conditions			
Good/Very good	463 (57.6)	471 (59.3)	934 (58.4)
Neither good nor bad	306 (38.1)	300 (37.8)	606 (37.9)
Bad/Very bad	35 (4.3)	23 (2.9)	58 (3.6)
Working conditions			
Good/Very good	392 (48.8)	501 (63.1)	893 (55.9)
Fair	376 (46.8)	261 (32.9)	637 (39.9)
Harsh/Very harsh	36 (4.4)	32 (4.0)	68 (4.2)

More migrants were married (57.1 percent overall) than unmarried. There were more married migrants in Mumbai (68.2 percent) than Ahmedabad (46 percent). This might be a reflection of more migrants being relatively younger in Ahmedabad as compared to migrants in Mumbai. Only a small number of migrants (5.3 percent in Mumbai and 10.2 percent in Ahmedabad) stayed with their wives. More married men stayed with their wives in Ahmedabad (10.2 percent) than in Mumbai (5.3 percent). This pattern could be due to a higher cost of housing and living in Mumbai compared to Ahmedabad. However, a majority in both cities i.e. 90-95 percent migrants, lived without their wives. Most migrants (94.5 percent) lived in rented accommodations. Most migrants had had some education. Only approximately 7 percent each in Mumbai and Ahmedabad were illiterate or never went to school. Approximately 56 percent in Mumbai and 47 percent in Ahmedabad had had 5 to 10 years of school education.

In this study, data suggested a more stabilized migration pattern in Mumbai than in Ahmedabad. Forty-seven and a half percent of migrants in Mumbai who had been migrating to Kherwadi, Mumbai had done so for more than 5 years compared with 19.3 percent in Piplaz, Ahmedabad. In Mumbai, 42.5 percent had been migrants for less than 5 years while 80.6 percent had been migrants for less than five years in Ahmedabad. More people had been a migrant for a longer period in Mumbai than Ahmedabad, suggesting Ahmedabad was either emerging as a new centre of migration or had more in and out flow. This was validated by qualitative results. The qualitative analysis shows that Mumbai has been a traditional destination place for migrants from Rajasthan. Towns in Gujarat have been emerging as destination places for migrants in recent years, especially

places like Surat, a hub for gem cutting and polishing and Ahmedabad, a hub for textile and cloth dyeing industries.

Majority in Mumbai (86.2 percent) worked on daily wage basis as compared to 26.2 percent in Ahmedabad. Approximately 73 percent migrants in Ahmedabad had permanent or regular jobs as compared to only 13.8 percent in Mumbai. Similarly, 92.4 percent migrants got work for 20-30 days per month in Ahmedabad as compared to 57.3 percent in Mumbai. A large percentage of migrants in Mumbai (41.2 percent) got work for 10-20 days as against 7.3 percent in Ahmedabad in the same category. Migrants in Mumbai worked mainly in construction sector and were dependent on labor market requirements while migrants in Ahmedabad worked in cloth factories and hence had relatively more stable employment. Migrants in Mumbai felt that employment opportunities in the last two-three years had worsened. The main reasons included increased use of machinery, especially in carpentry, and increased migration from other states such as Bihar, Uttar Pradesh, Madhya Pradesh and Karnataka. A large labor pool and consequent competition for jobs had affected the job opportunities. In Ahmedabad, though, job opportunities seemed to be increasing. A few years ago, there were 1000 migrants from Rajasthan in Piplaz. Within 5-6 years, there were approximately 4000 migrants from Rajasthan alone. In addition, there were migrants from other states too.

However, a higher number of workdays and the regularity of employment in Ahmedabad did not result in higher earnings for migrants in Ahmedabad. Even if migrants in Mumbai were not working for as many days as migrants in Ahmedabad, they were earning more

or less similar incomes. Most migrants fell in the middle income category of 3000-5000 Indian rupees per month (approximately 50 percent in Mumbai and 61 percent in Ahmedabad). A little more than a quarter of migrants earned less than 3000 rupees (28.2 percent in Mumbai and 26.3 percent in Ahmedabad). There was a group of migrants who earned more than 5000 rupees in both cities, and the size of this group being bigger in Mumbai than Ahmedabad. Approximately 22 percent migrants in Mumbai earned more than 5000 rupees per month. Migrants earning more than 5000 rupees constituted a relatively smaller group in Ahmedabad, only 13 percent of all migrants. Overall, migrants' monthly incomes fluctuated; however, this fluctuation in income was more pronounced in Mumbai than Ahmedabad. Approximately 90 percent in Mumbai reported that their income fluctuated from month to month as against 51.5 percent in Ahmedabad. This might be attributed to the fact that migrants in Ahmedabad had relatively more stable employment as factory workers than in Mumbai where they were mainly employed in the construction sector. In Ahmedabad, 86.1 percent migrants got paid on a monthly basis as compared to 33.3 percent of migrants in Mumbai. In Ahmedabad, migrants were employed in factories. Income was not the same for everybody but most people earned 3000 rupees at minimum. Supervisors and *thekedars* (contractors) earned more than an average worker.

The qualitative analysis shows that participants in general agreed that married people had more responsibilities. They were more worried about getting work. They worried about the well being of their wives and children. Unmarried men were therefore relatively less concerned than married men even if they did not get work. However, there was no

difference in the lifestyles of married and unmarried migrants. There was no institutionalized system for learning the construction work in Mumbai or factory work in Ahmedabad. A person learnt on the job. Mostly, migrants worked with their relatives or friends and learnt the skills. One could get work easily even if he was not trained or experienced. Generally the person who helped someone to come to the city also taught him the work. Several factors played a role in determining who got work and who did not. An analysis of responses in key informant interviews and focus group discussions indicated that the most important factors in getting work were knowing someone and maintaining good relations with contractors and employers, and skill and capacity to complete a job to employer's or contractor's satisfaction. Caste, duration of migration and education did not seem to play a major role.

I.C. Social Capital of Migrants: Content and quality of social relations in Mumbai and Ahmedabad

Table 5 shows migrants' social capital in domain and component forms in Mumbai and Ahmedabad. Bonding and linking domains of social capital had higher values for migrants in Ahmedabad than Mumbai. Bridging social capital was higher in migrants in Mumbai as compared to migrants in Ahmedabad. Table 5 shows that all the domains of social capital for migrants in the two cities were significantly different ($p<.000$). Social capital mean scores were higher for all of the components of bonding social capital for Ahmedabad than Mumbai except for the component 'differences among the community members'. All the components of bridging social capital had higher mean scores for migrants in Mumbai than Ahmedabad. All the components of linking social capital had higher values for migrants in Ahmedabad than Mumbai except component 'participation in activities that link outside'. Components 'personalized trust with services,' 'links with services' and 'reciprocal trusting relations with service providers' were higher for Ahmedabad. Only one subcomponent, 'participation in linking activities' is higher for Mumbai than Ahmedabad. Migrants have higher participation in linking kind of activities in Mumbai than Ahmedabad.

Components 'differences among the community members' and 'communitarian sense' of bonding social capital were not statistically different in the two cities. All the other components of bonding, bridging and linking social capital were significantly different in the two cities.

Table 5: Comparison of Social Capitals (Domains and Components) in Mumbai and Ahmedabad

	Research Site	N	Mean	Std. Deviation	P value
Overall Social Capital	Mumbai	804	-1.00	5.12	.00
	Ahmedabad	794	1.01	4.98	
Bonding Social Capital	Mumbai	804	-.45	2.36	.00
	Ahmedabad	794	.45	2.30	
Bridging Social Capital	Mumbai	804	.22	2.04	.00
	Ahmedabad	794	-.22	1.71	
Linking Social Capital	Mumbai	804	-.77	2.43	.00
	Ahmedabad	794	.78	2.19	
Components of Bonding Social Capital					
Differences among community members	Mumbai	804	.02	1.00	.38
	Ahmedabad	794	-.02	1.00	
Personalized trust and help	Mumbai	804	-.31	1.00	.00
	Ahmedabad	794	.31	.90	
Communitarian sense	Mumbai	804	-.03	.96	.25
	Ahmedabad	794	.03	1.03	
Generalized trust and help	Mumbai	804	-.13	1.12	.00
	Ahmedabad	794	.13	.84	
Components of Bridging Social Capital					
Generalized trust in neighborhood and city people and help	Mumbai	804	.06	1.00	.01
	Ahmedabad	794	-.06	.99	
Participation in bridging kinds of activities	Mumbai	804	.09	1.25	.00
	Ahmedabad	794	-.09	.64	
Trust in neighborhood	Mumbai	804	.06	1.00	.01
	Ahmedabad	794	-.06	1.00	
Components of Linking Social Capital					
Personalized trust in services	Mumbai	804	-.32	.91	.00
	Ahmedabad	794	.32	.98	
Participation in activities that link outside	Mumbai	804	.10	1.09	.00
	Ahmedabad	794	-.10	.89	
Access to services	Mumbai	804	-.11	.96	.00
	Ahmedabad	794	.11	1.03	
Reciprocal trusting relations from the services	Mumbai	804	-.45	1.08	.00
	Ahmedabad	794	.45	.65	

A deeper analysis of the qualitative data demonstrates that the two cities were different when it came to the organization of social relations. Ahmedabad had what could be called a 'buddy culture' while Mumbai had a 'daddy culture.' Most migrants in Ahmedabad were young (70 percent are below the age of 25 years). Even the contractors and supervisors were relatively young. Most of them had been in the city for less than 5 years. They lived with their friends as roommates. Renting a television and VCR was common and mostly pornographic movies were watched. Friends knew about each other's sexual relations. In Mumbai, migration has had a long history and most migrants were employed in the construction sector or in carpentry. Both of these professions are traditional professions and people of certain castes work in these professions. Most migrants in Mumbai belonged to *kumawat* and *khatik* castes. Migration happened on the line of family, kinship or caste. The study participants reported that migrants in Mumbai were tied to the construction sector by virtue of carrying it out traditionally or because they had invested time in learning the craft. The study shows that migrants were older in Mumbai and the duration of migration was longer as compared to Ahmedabad. Most migrants reported getting work on someone's reference or got work because the contractor was Rajasthani or they were working with some of their relatives. In many cases, a son or younger brother joined his father or elder brother. In Mumbai, people lived with their relatives, father or brother. A person became a contractor at an advanced age after he had worked in the field for many years and had enough money to take contracts. There were some known senior migrants either as a roommate or as an employer/contractor, giving rise to what I have termed as 'daddy culture'. There was a buddy culture in Mumbai also but it was overshadowed by daddy culture.

On the other hand, focus group discussions and in-depth interviews showed that migrants worked in cloth factories in Ahmedabad. Work involved cloth measuring, dyeing, folding and loading. No traditional or specialized knowledge was required to do this work. The factory owners gave responsibility of hiring and managing the labour to labour contractors. These labour contractors were either people who were known to the factory owners or migrants who had been in the city for some time. People came to know about these agents through friends or through word of mouth. These labour contactors also contacted young people in villages to hire them for work in factories. Young people from villages of Shekhawati region had migrated to Piplaz through these labour contractors or friends. Migration happened from all castes in Ahmedabad. The majority of migrants belonged to upper castes such as *jat* and *brahmin*. Contrary to Mumbai where the chain of migration constituted family members or same caste people or relatives, migration to Ahmedabad mostly happened through friends and labour agents.

Migrants in interviews and group discussions reported that the level and intensity of relations with other community members, with migrants from other states and with local community members varied from individual to individual. In both cities, some migrants seemed to be having better relations than others with their community members, local people and with migrants from other states. However, social relations within community were more in number and thicker in nature than the relations with local community and migrants from other states. In both cities, there was a generalized sense of trust in community members. In spite of a certain level of ‘generalized sense of trust’ in the

community, trust and reciprocity were much more '*particularized*' in Mumbai; thus creating several small concentric 'pockets of trust and reciprocity'. Migrants had more social interactions with people they shared accommodation, their neighbors and their relatives. In Mumbai, migrants had closer relations with their room partners and relatives. In Ahmedabad, migrants shared more comfortable and closer relations with their 'buddies', those who shared room with them and those who worked with them. There was a broader identity of being Rajasthani migrant in an alien land which connected them to each other. However, the thicker ties encompassed relationships involving family members and relatives in Mumbai and friends and room partners in Ahmedabad.

In Ahmedabad, migrants worked in factories and 500-1000 migrants spent time together, working in twelve hours shifts. The residential units were very close to the factories and it took five to ten minutes to reach the workplace. Sundays were off-days. In contrast to this, migrants in Mumbai worked on construction sites, each site employing 10-25 migrants on average. Carpentry sites employed even fewer migrants than this. On most occasions, the work sites happened to be very far from the residential area. Migrants traveled by trains for one to one and half hour to reach the work site. Those who were not associated with a contractor sat at *naka* (labour point) and waited to be hired. Migrants in Mumbai had only one day off in a month on the day of *amavashya* (no moon day). On their off day, migrants in Mumbai gathered in the garden, played cards or just chatted and relaxed with tea. The majority of the participants in group discussions in Mumbai reported that they remained in the room and used the off-day to rest. They might also go to see some friend or relative or a prospective employer or a contractor. Migrants in

Piplaz in Ahmedabad got one day off every week on Sunday. Migrants in Ahmedabad spent time talking to each other or visited each other's place or went to roam around in the city. Some migrants preferred to play cards at *nukkad* (street corner) or go to see movie in the city on off-days. Migrants also reported renting a VCD player. They shared the cost to rent a VCD to see films (mostly pornographic movies) in their room. Migrants in Ahmedabad had more time together as well as more time for sociability compared to migrants in Mumbai.

In Mumbai, social relations got strained due to competing for same or similar types of jobs. Strong relations were restricted to relatives and senior migrants such as contractors who could help in getting work. In Ahmedabad, this was not the case. The job was more or less secure if one was interested in doing a job. Migrants in Mumbai worked in the construction sector. Social capital also seemed to work in opposite directions in Mumbai. On the one hand, social capital helped migrants in the process of migration, finding work and other day-to-day matters of managing in a new city. On the other hand, people also tended to avoid hiring known people or working for their relatives. One young migrant worker told that he preferred working with a contractor form Uttar Pradesh because he had to work more for less pay if he worked with his uncle. Another contractor told that he preferred hiring Uttar Pradesh people as laborers as they worked harder than the Rajasthani who worked less and he was unable to be strict with them as they were all known people or relatives. A senior migrant worker (carpenter) in Kherwadi reported, "*I am a contractor now and I keep people as per their quality of work. I have six persons working for me right now. Out of them two are Rajasthani and four others are bhaiyya*

*(*from Uttar Pradesh*). Rajasthani people ask me for work but I tell them that I don't have work. two people who are from Uttar Pradesh have come with reference from a Rajasthani and two others have been working with me for last three years.*"

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In Mumbai, it also came out during key informant interviews and group discussions that relations, over period, had become more monetized and less social in nature. There were various references to phrases like "why to interfere; what do I gain; *kaam ka rishta"* (a formal relation that serves some purpose) etc. When queried on whether there had been some qualitative change in social relations among community members one senior migrant told, "*There is a slight difference between those who came earlier and who have come recently. There was more bhaichara (brotherhood) earlier. These days, people don't care much for relationships etc. Now, if you have more money, you have higher status*". Another senior migrant told, "*Nobody is interested in group or community or others welfare. Dead body of one migrant kept lying in the public garden for two days. Nobody came forward to help. People show off of concern. 90% in kadiya (mason) people drink and when they are drunk, they talk of trust and love and once the effect of alcohol is gone; all the talks of love, trust are also gone*".

Migrants in Ahmedabad had higher bonding social capital than migrants in Mumbai because they spent more time together at work; they had more time at their disposal for leisure activities; they did not have to compete for same jobs; and they had security of a regular job. In Mumbai, migrants worked with a smaller group of people. A change in work site or contractor meant new coworkers. Very often, they competed for the same

jobs. They left home early in the morning and returned back in the night. They had only one day off in a month. All these factors resulted in less time and motivation for engaging in community activities or leisure activities. As a result migrants in Mumbai had lower bonding social capital than migrants in Ahmedabad. The quantitative analysis also shows that migrants' bonding social capital was higher in Ahmedabad than Mumbai (Table 5).

An analysis of qualitative data demonstrates that relations with migrants from other states were mostly limited to work and workplace in both cities. Relations with landlords and other members of local community also varied from migrant to migrant. Some migrants reported good relations with the landlords while others did not. Comparatively, migrants reported better relations with their landlords in Mumbai than Ahmedabad. The reason was that the landlords in Mumbai were from Rajasthan while landlords in Gujarat were local Gujarati people. Similarly migrants in Mumbai reported better relations with migrants from other states as compared to migrants in Ahmedabad. This was mainly because migrants in Mumbai worked with migrants from other states and exchanged information about jobs from all the migrants including migrants from other states while this need for information on availability of job was not there in Ahmedabad resulting into relatively lower interaction with migrants from other states. As a result of better relations with Rajasthani landlords, high level of trust in immediate neighborhood and more interactions with migrants from other states, migrants in Mumbai had higher bridging social capital than migrants in Ahmedabad. Analysis of the quantitative data also shows that migrants had higher mean scores for overall bridging social capital as well as components of bridging social capital (Table 5).

In Mumbai, migrants reported that people benefitted if they knew someone, otherwise migrants did not benefit from any government scheme. Political parties did not care much for them because they were not registered voters in Mumbai. Their status of being a migrant excluded them from most services as most municipality services were earmarked for those who were permanent residents of Mumbai and hence had ration cards. Kherwadi witnessed severe floods in 2005. Migrants suffered losses. Most migrants reported that they did not get any compensation from the government. Only those migrants got some benefits who had good relations with landlords or local leaders. Most migrants reported maintaining good relations with influential people in the community. The analysis of the quantitative data shows that compared to migrants in Ahmedabad, migrants in Mumbai had high social capital for component 'participation in linking kind of activities' that involved voting, campaigning in elections as well as making contacts with influential people and elected representative (Table 5). For all the other components of linking social capital related to services, the scores were higher for Ahmedabad.

Both in Mumbai and Ahmedabad, giving donation for cultural programs or festival celebrations was very common among migrants. Most migrants reported that they gave donation because it went towards some noble social or community work or because it was collected in the name of God. Group discussions also indicated that another factor behind giving donation was some open or covert social pressure from local community /community leaders. Migrants felt that giving donation in the cultural or festival programs would help them have amicable relations with others.

Section II: Understanding Migrants' HIV Risk Behaviours

II.A. Migrants' HIV Risk Scenarios in Mumbai and Ahmedabad

The findings from this study pointed towards the prevalence of high risk behaviour among migrants at destination places. Key informant interviews and focus group discussions revealed three types of sexual relationships migrants had in Mumbai: sex with female coworkers; sex with sex workers; and relationships with dance bar girls. More *mistris* (masons) went to sex workers compared to the laborers. Laborers could not afford to go to sex workers as they did not have enough money to spare. A mason earned 350-400 rupees (approximately 7-8 CAD) while a laborer earned 90-150 rupees (approximately 2-3 CAD) per day. Most migrants seemed to have a fairly good idea about red light areas and other sex work places. The most frequently mentioned places included Bandra Band Stand, Dadar, Grant Road and Kamatipura. Migrants reported that one could get a sex worker very easily in Mumbai. Migrants reported that both married and unmarried men went to sex workers. Generally, migrants did not talk about sex related issues openly in Mumbai. They might talk with their friends, but generally kept these topics to themselves.

Contrary to Mumbai, where migrants did not talk about sex openly, migrants in Ahmedabad talked about sex openly. Qualitative data analysis shows that there were three types of sex work: sex with coworkers, sex with sex workers and sex with massage parlor masseuse. The factories employed male and female workers. The female workers

were also migrants from other parts of Gujarat or other states. They spent twelve hours together every day/night. Migrants recounted many instances where sexual relations got established among coworkers. Male migrant workers took their female coworkers to hotels for sex after the shift or on Sundays. Many migrants reported that sex also took place in factories. Apart from coworkers, sex workers were also easily available in Piplaz, nearby areas like Narol and Isanpur, and in Ahmedabad city. Migrants also visited massage parlors for sex. Few instances were also recounted involving sex among themselves; a phenomenon which was almost absent in Mumbai. One young migrant told, "*One can get sex workers at Narol, Isanpur, Geetamandir and Lal Darwaja (places in Ahmedabad). Girls work in the factory, so there is greater possibility (of sex). During Diwali, in Narol where I used to live earlier, many girls used to stand on roadside. The rates are 150-200 rupees. Most people go to Narol and more people go on Sundays. People go more after alcohol consumption. People get guptrog (STI) but nobody tells about it. Girls are generally 17 to 25 years old. You get a girl based on what kind of money you spend*".

In Mumbai, contractors and masons hired women workers and in exchange, they sought sexual favors from these women workers. In Ahmedabad, sexual relations with coworkers were based on intimacy and long acquaintance. The sexual networks with women coworkers in Ahmedabad were not limited to contractors and supervisors but also included migrant labourers. Migrants in both cities reported a close relationship between alcohol consumption and sex with coworkers/ sex workers. The majority of the migrants drank alcohol in Kherwadi and Piplaz. Mostly, they drank *des*i (locally made) but one

could get *angrezi* (IMFL-Indian Made Foreign Liquor) also. Drinking was described as a normal part of migrant life. In words of a migrant, "*If laborers don't drink, how they will go on, how will they live on? They will eat less vegetable, but they will drink. They find out where they can get alcohol. Where there is will, there is a way*". Migrants attributed their drinking and having sex with sex workers and coworkers to loneliness, hardship, and stress. In Mumbai, though, there were some who were skeptical about alcohol and sex relationship.

II.B. HIV Risk Behaviours in Migrants in Mumbai and Ahmedabad

Descriptive analysis shows the presence of HIV risk behaviours in migrants in Mumbai and Ahmedabad (Table 6). In total, 385 respondents (24.1 percent) reported having one or more casual partners in the last 12 months in the city. Ahmedabad had more migrants with casual partners than Mumbai, 251 (31.6 percent) and 134 (16.7 percent) respectively. Migrants in Ahmedabad had 2.4 times the risk of having a casual partner as compared to Mumbai. Overall, 218 migrants (13.6 percent) had had sex with a sex worker at destination place in the last 12 months. More migrants in Ahmedabad (138; 17.4 percent) as compared to Mumbai (80; 10.0 percent) reported having sex with a sex worker. In total, 123 respondents (7.7 percent) reported no or inconsistent condom use with a sex worker in the last 12 months. More migrants reported inconsistent or no condom use in Ahmedabad (96; 12.1 percent) than Mumbai (27; 3.4 percent). Approximately 33.3 percent in Mumbai and 69.5 percent in Ahmedabad of those who reported sex with a sex worker did not use a condom or used it inconsistently.

Table 6: HIV Risk Behaviours among Migrants in Mumbai and Ahmedabad

HIV Risk Measure	Mumbai N=804 (n (%)	Ahmedabad N=794 n (%)	Risk estimate (Mumbai / Ahmedabad)	Difference in Mumbai & Ahmedabad P-value
Casual partners				
One or more casual partner/s	134 (16.7)	251 (31.6)	1.9	.000
Mean	.16	.32		
Std. Deviation	.37	.46		
Sex with a Sex Worker				
Yes	80 (10.0)	138 (17.4)	1.7	.000
Mean	.10	.17		
Std. Deviation	.30	.38		
Condom Use with a Sex Worker				
No or inconsistent condom use	27 (3.4)	96 (12.1)	3.5	.000
Mean	.03	.12		
Std. Deviation	.18	.33		

Table 6 shows that the difference between the two research sites was statistically significant for all the three measures (p. < .001).

II.C. Risk behavior in village and city

The main aim of the study was to explore the relationship between migration and HIV risk. Within that aim, it was decided to test for migrants' HIV risk behaviour in villages and the city to see whether there was an incremental HIV risk behaviour in city post migration or whether migrants were continuing their risk behaviour from village to city and nothing special was happening in the city post migration. Migrants were asked two questions to meet this objective: ever had sex with a sex worker in village; and had sex with sex worker in last twelve months at destination place in the city.

Table 7 shows that there was an increased sexual activity with sex workers in the city as compared to the villages. Compared to 43 participants (2.7%) who reported ever having sex with sex worker in the village, 218 (13.6) reported sex with sex worker in the destination place. Out of the 43 people who reported having had sex with sex worker in the village, 19 continued their behavior in the city. Out of the total 218 who reported having had sex with sex worker at destination, 199 people are the ones who had never had sex with a sex worker in village. They had sex with a sex worker in city only. Chi-square test were undertaken to test for whether there is statistically significant difference in risk behavior in migrants in village and city. McNemar statistics were performed to test for differences at individual level for the same individual at two locations and were used to test for whether these were the same individuals who were having risk behavior at both of the locations or if these were different individuals who had high risk behavior in two locations. Pearson Chi-Square Test for difference in risk behavior in village and city was statistically significant for overall sample ($p<.000$) as well as Mumbai ($p<.000$) and Ahmedabad ($p<.000$) (Table 7). The McNemar Test for difference in the individuals who had had sex with sex worker in city and in village was statistically significant for overall sample ($p<.000$) as well as Mumbai ($p<.000$) and Ahmedabad ($p<.000$) (Table 7). The study shows that there was an increased HIV risk in terms of having had sex with a sex worker in the city as compared to villages. The study suggests that more and different individuals were engaged in high risk behavior at the destination place post migration. It was not merely the case of migrants continuing their high risk behavior from village to city.

Table 7: Comparative HIV Risk in Villages and City

	Total number of migrants who had sex with a sex worker in city	Total number of migrants who had sex with a sex worker in village	Had sex with a sex worker only in village	Had sex with a sex worker only in city
Mumbai	80	18	11	73
Ahmedabad	138	25	13	126
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Mumbai				
Pearson Chi-Square	17.2	1	.000	
McNemar Matched Odds Ratio	6.6			.000
Ahmedabad				
Pearson Chi-Square	16.8	1	.000	
McNemar Matched Odds Ratio	9.7			.000

II.D. Perspectives on Sex with a Sex Worker in the City

We also studied the conditions and motivations behind the increased sex with a sex worker at destination place. In focus group discussions and in-depth interviews in this study, migrants gave several reasons for looking for sex with sex workers in the city such as peer pressure, being married and staying away from wife, drinking, loneliness and need for physical pleasure. One migrant stated, "In my opinion, loneliness, living away from my wife, and alcohol are the reasons behind going to a sex worker. But I think alcohol is number one". While another migrant said, "*I think alcohol is just an excuse for sex. They drink alcohol a lot but they go to sex workers only 3-4 times. In my opinion, the main reasons why people go to sex workers are: seeing others doing it; sex being easily available; developing a habit after initial sex.*"

Univariate analysis was undertaken to test for the association between affirmative response for the potential reasons for looking for sex with sex workers and actually having sex with sex workers at destination place. The results are presented in Table 8. Based on existing literature, the association between having had sex with a sex worker was tested with 11 potential reasons. The potential reasons comprised behind an increased sex with sex workers in the city such as being away from wife, city ensuring anonymity, alcohol consumption, lack of social engagement and entertainment, loneliness, peer pressure, variation in disposable income, to forget hardship and stress, easy availability of sex, man's nature to have sex regularly, sex with sex worker being a sign of manliness etc. Out of these reasons, two reasons were associated with increased sex with sex workers in both the cities. Loneliness and easy availability of sex in the city were associated with higher chances of having sex with sex worker in both the cities. Loneliness was associated with three times higher risk for sex with sex workers in Mumbai while easy availability of sex in city was associated with 10 times higher risk for having sex with sex workers in Ahmedabad. In addition, being away from wife, alcohol consumption, city ensuring anonymity and to forget hardship and stress were significantly associated with sex with sex workers in Mumbai while lack of social engagement and variable disposable income were significantly associated with sex with sex workers in Ahmedabad. Factors such as being man's nature to have regular sex and having sex with sex worker being a sign of manliness were not associated with sex with sex worker. The study demonstrates that migration specific characteristics were associated with sex with sex worker in destination cities.

Table 8: Reasons for looking for sex in the city & actually having had sex with sex worker in the city

Potential Reasons	Mumbai			Ahmedabad		
	N (804)	Visited Sex Worker in City (% of n)	O.R. (C.I.)	N (794)	Visited Sex Worker in City (%)	O.R. (C.I.)
Loneliness						
Yes	259	45 (17.4)	3.06 (1.92-4.90)*****	542	107 (19.7)	1.75 (1.14-2.70)*
No	545	35 (6.4)		252	31 (12.3)	
Easy availability of sex						
Yes	383	49 (12.8)	1.85 (1.15-2.96)*	577	132 (22.9)	10.43 (4.53-24.03)*
No	421	31 (7.4)		217	6 (2.8)	
Being away from wife						
Yes	431	67 (15.5)	5.10 (2.76-9.40)*	618	104 (16.8)	.84 (NS)
No	373	13 (3.5)		176	34 (19.3)	
Alcohol assumption						
Yes	142	22 (15.5)	1.91 (1.13-3.24)*	346	56 (16.2)	.86 (NS)
No	662	58 (8.8)		448	82 (18.3)	
City ensuring anonymity						
Yes	268	38 (14.2)	1.94 (1.22-3.10)*	392	76 (19.4)	1.32 (NS)
No	536	42 (7.8)		402	62 (15.4)	
To forget hardship and stress						
Yes	135	20 (14.8)	1.76 (1.02-3.04)*	277	50 (18.1)	1.07 (NS)
No	669	60 (9.0)		517	88 (17.0)	
Lack of social engagement						
Yes	138	20 (14.5)	1.71 (NS)	182	41 (22.5)	1.54 (1.02-2.33)*
No	666	60 (9.0)		612	97 (15.8)	
Variation in disposable income						
Yes	98	11 (11.2)	1.17 (NS)	271	66 (24.4)	2.02 (1.39-2.93)*
No	706	69 (9.8)		523	72 (13.8)	

Note:

*****: Statistically significant; NS: Non significant

Section III: Factors Associated with HIV risk Behaviour in the City

III.A. Association of Migrants' Sociodemographic Characteristics with HIV Risk Behaviour

Table 9 and 10 offer the univariate and multivariate analyses for migrants' HIV risk with their sociodemographic characteristics in Mumbai and Ahmedabad. The tables present only those associations which were statistically significant.

In Mumbai, the nature of the job , number of workdays, average earnings, income steady or fluctuating and the mode of salary receipt were associated with all three HIV risk measures of interest in the univariate analysis. Having a permanent job, higher number of workdays, earning higher than 5000 rupees per month, a steady income from month to month and getting paid on a monthly basis were associated with higher risk for all the three measures.

In the multivariate analysis, having a higher number of workdays and higher income were associated with higher risk for all the three risk variables. In addition, steady income was associated with having casual partners in the city while mode of salary receipt was associated with having had sex with sex worker in last 12 months in the city.

Age, education, living with one's wife or alone and duration of migration were not associated with any of the HIV risk measures in Mumbai.

In Ahmedabad, marital status, living with one's wife or alone, the nature of the job, steady income or fluctuating income and mode of salary receipt are associated with all or most HIV risk measures in the univariate analysis. Being unmarried, living without one's wife, the permanence or regularity of the job, fluctuating income and a daily or weekly mode of salary receipt are associated with higher HIV risk.

In the multivariate analysis, the same variables are associated and have the same relationship. Those who live singly have higher risk. A permanent/regular job is a risk factor as compared to a daily wage. Fluctuating income is associated with higher HIV risk. Daily and weekly modes of salary receipt are associated with higher HIV risk.

Age, education, income and number of workdays are not associated with any of the HIV risk measures among migrants in Ahmedabad.

Table 9: Univariate Association between Selected Sexual Behaviours & Sociodemographic Characteristics in Mumbai and Ahmedabad

Measures	N	Casual partners		Sex with CSW		No condom use with CSW	
		n (%)	OR (C.I.)	n (%)	OR (C.I.)	n (%)	OR (C.I.)
A. Mumbai							
Nature of job							
Daily wage basis	693	106 (15.3)	1.00	62 (8.9)	1.00	18 (2.6)	1.00
On long contract	34	5 (14.7)	.95 (.36-2.52)	4 (11.8)	1.36 (.46-3.98)	1 (2.9)	1.14 (.15-8.77)
Permanent or regular job	77	23 (29.9)	2.35 (1.39-4.01)	14 (18.4)	2.26 (1.20-4.27)	8 (10.5)	4.35 (1.82-10.4)
No. of work-days in a month							
<20 days	343	39 (11.8)	.55 (.34-.77)	18 (5.4)	.39 (.21-.64)	4 (1.2)	.23 (.08-.68)
20-30 days	461	95 (20.6)	1.00	62 (13.5)	1.00	23 (5.0)	
Average earning							
<3000 rupees	227	28 (12.3)	1.00	14 (6.2)	1.00	3 (1.3)	1.00
3000-5000 rupees	401	60 (15.0)	1.25 (.77-2.02)	33 (8.2)	1.36 (.71-2.61)	10 (2.5)	1.91 (.52-7.01)
>5000 rupees	176	46 (26.1)	2.51 (1.50-4.23)	33 (18.9)	3.51 (1.81-6.79)	14 (8.0)	6.45 (1.82-22.8)
Income steady or fluctuating							
Steady	81	25 (31.2)	2.51 (1.50-4.20)	14 (17.5)	2.08 (1.11-3.90)	7 (8.8)	3.32 (1.36-8.12)
Fluctuating	723	109 (15.1)	1.00	66 (9.1)	1.00	20 (2.8)	1.00
Mode of salary receipt							
Daily basis/Weekly/Job based	513	70 (13.6)	1.00	36 (7.0)	1.00	11 (2.1)	1.00
Monthly / Lump sum contract based	291	64 (22.0)	1.78 (1.23-2.60)	44 (15.1)	2.36 (1.48-3.76)	16 (5.5)	2.65 (1.21-5.80)
B. Ahmedabad							
Marital status							
Currently Married	365	91 (24.9)	1.00	50 (13.7)	1.00	38 (10.4)	1.00
Unmarried/Never Married	429	160 (37.3)	1.79 (1.32-2.44)	88 (20.5)	1.63 (1.11-2.38)	58 (13.5)	1.34 (.87-2.08)
Live with wife or alone							
With wife/ wife but wife comes and stays	119	16 (13.4)	1.00	6 (5.0)	1.00	4 (3.4)	1.00
Without wife / Unmarried	675	235 (34.8)	3.44 (1.98-5.96)	132 (19.6)	4.58 (1.97-10.6)	92 (13.6)	4.54 (1.63-12.6)
Nature of job							
Daily wage basis	208	59 (28.4)	1.00	28 (13.5)	1.00	21 (3.4)	1.00
On long contract	206	52 (25.2)	.85 (.55-1.32)	23 (11.2)	.81 (.45-1.46)	14 (6.8)	.65 (.32-1.31)
Permanent or regular job	380	140 (36.8)	1.47 (1.02-2.12)	87 (22.9)	1.91 (1.20-3.04)	61 (16.1)	1.70 (1.00-2.89)
Income steady or fluctuating							
Steady	385	101 (26.2)	.61 (.45-.83)	49 (12.7)	.52 (.36-.77)	28 (7.3)	.39 (.25-.63)

Fluctuating	409	150 (36.7)	1.00	89 (21.8)	1.00	68 (16.6)	
Mode of salary receipt							
Daily basis / Weekly/ Job based	90	45 (50.0)	1.00	29 (32.2)	1.00	24 (26.7)	1.00
Monthly / Lump sum contract based	704	206 (29.3)	.41 (.26-.65)	109 (15.5)	.38 (.24-.63)	72 (10.2)	.31 (.18-.53)

Note:

1. N = Total number of migrants in a particular sociodemographic category
2. n = Number of migrants with risk behaviour in that particular category
3. O.R. = Odds ratio
4. C.I. = Confidence Intervals

Table 10: Multivariate Analysis of HIV Risk & Sociodemographic Characteristics in Mumbai and Ahmedabad

Measure	Casual partners OR (C.I.)	Sex with CSW OR (C.I.)	No Condom use with CSW OR (C.I.)
A. Mumbai			
Workdays in a month (reference: <20 days)	1.59 (1.03-2.44)	1.85 (1.02-3.35)	3.05 (.98-9.46)*
Average income (reference: <3000)	1.34 (1.00-1.80)	1.54 (1.06-2.23)	1.88 (.98-3.59)**
Income steady	2.00 (1.17-3.39)		
Monthly or lump sum contract based mode of salary receipt (reference: daily/weekly/job based		1.70 (1.03-2.79)	
B. Ahmedabad			
Marital status (Unmarried)	1.71 (1.19-2.44)	1.50 (.98-2.29)***	
Living without wife or unmarried	3.58 (1.91-6.72)	5.32 (2.11-13.42)	6.10 (2.12-17.49)
Nature of job (permanent job)	1.46 (1.19-1.79)	1.70 (1.31-2.20)	1.74 (1.31-2.31)
Income steady	.58 (.41-.83)	.45 (.29-.70)	.39 (.23-.65)
Monthly or lump sum contract based mode of salary receipt (reference: daily/weekly/job based	.36 (.22-.61)	.35 (.20-.63)	.34 (.19-.63)

Note:

1. Variable(s) entered on step 1: age1, edu2, mart3, staying alone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.
2. All variables treated as ordinal except marital status (married/unmarried), staying alone or with wife, income steady or fluctuating and mode of salary receipt (daily/weekly or job based)
3. * - significance level = .054; ** - significance level = .57; *** - significance level = .062
4. Vacant cells mean the variable was not significant in the final logistic regression model.

III.B. Social Capital and HIV Risk in Migrants in Mumbai and Ahmedabad

a. Relationship at the domain level

Mumbai:

In univariate analysis (Table 11), bonding and linking social capital were significantly associated with one or more sexual risk behaviours in Mumbai. Low level of overall social capital was associated with higher risk; however, the association was not statistically significant. Low level of linking social capital was associated with higher risk for having had casual partners and sex with sex worker; however it was statistically significant in the case of having had casual partners in the city in last 12 months. Low level of bonding social capital was associated with lower risk for having had sex with sex worker. There are only 27 people in Mumbai who have reported no or inconsistent condom use. That may be the reason that it did not come out statistically significant for any domain of social capital.

Portes (2000) cautioned against a ready attribution of positive outcome to social capital because the purported effect of social capital could be because of other extraneous factors such as socioeconomic status. To count for these other factors, he recommended checking for the effect of other potentially related factors. So, a multivariate analysis was undertaken where sociodemographic and other migration characteristics were included in the model along with social capital measures. Table 12 shows that associations of social capital with outcome HIV risk measures remain in the model even when controlled for sociodemographic and other migration characteristics in Mumbai and Ahmedabad.

In multivariate analysis, similar to the univariate analysis, bonding and linking social capital are significantly associated. Linking social capital at low level is associated with higher risk for having casual partner and sex with sex worker. Bonding social capital at low level is significantly associated with lower risk for having had sex with a sex worker.

Ahmedabad:

In univariate analysis (Table 11), overall social capital, bonding, bridging and linking social capital were significantly associated with at least two of the three risk measures. Low levels of overall social capital, bonding social capital and bridging social capital were associated with higher risk. However, overall social capital and bonding were statistically significant in the case of having had sex with sex worker and no or inconsistent condom use. Linking social capital was significantly associated only with having had sex with sex worker in city in last 12 months and indicated a lower risk in migrants who had low linking social capital.

In multivariate analysis, bonding, bridging and linking social capital were associated with at least two of the three risk measures in Ahmedabad. Bonding and bridging at low level were related to higher risk while linking social capital at low level was associated with lower risk.

Table 11: Univariate Relations of HIV Risk Measures with Social Capital (Domains) in Mumbai and Ahmedabad

Measure	Casual partners			Sex with CSW			Condom use with CSW		
				OR (C.I.)			OR (C.I.)		
	n/N	%	OR (C.I.)	n/N	%	OR (C.I.)	n/N	%	OR (C.I.)
Mumbai									
Overall Social Capital									
Low	55/319	17.2	1.48 (NS)	28/319	8.8	1.10 (NS)	7/319	2.2	.65 (NS)
Medium	53/274	19.3	1.71 (1.03-2.84)*	35/274	12.8	1.67 (NS)	13/274	4.7	1.45 (NS)
High	26/211	12.3	1.00	17211	8.1	1.00	7/211	3.3	1.00
Bonding Social Capital									
Low	49/318	15.4	.70 (NS)	21/318	6.6	.36 (.20-.65)*	8/318	2.5	.46(NS)
Medium	42/277	15.2	.69 (NS)	25/277	9.0	.51 (.29-.89)*	8/277	2.9	.53 (NS)
High	43/209	20.6	1.00	34/209	16.3	1.00	11/209	5.3	1.00
Bridging Social Capital									
Low	37/232	15.9	.88 (NS)	24/232	10.3	.96 (NS)	7/232	3.0	.78 (NS)
Medium	46/284	16.2	.89 (NS)	25/284	8.8	.80 (NS)	9/284	3.2	.82 (NS)
High	51/209	17.7	1.00	31/288	10.8	1.00	11/288	3.8	1.00
Linking Social Capital									
Low	77/405	19.0	1.79 (1.06-3.00)*	44/405	10.9	1.45 (NS)	8/405	2.0	.50 (NS)
Medium	36/218	16.5	1.51 (NS)	22/218	10.1	1.34 (NS)	12/218	5.5	1.45 (NS)
High	21/181	11.6	1.00	14/181	7.7	1.00	7/181	3.9	1.00
Ahmedabad									
Overall Social Capital									
Low	88/241	36.5	1.31 (NS)	57/214	26.6	1.66 (1.09-2.50)*	55/214	25.7	4.96 (2.89-8.49)*
Medium	51/258	19.8	.46 (.31-.68)*	23/258	8.9	.44 (.27-.74)*	20258	7.8	1.20 (NS)
High	112/322	34.8	1.00	58/322	18.0	1.00	21/322	6.5	1.00
Bonding Social Capital									
Low	75/215	34.9	1.07 (NS)	54/215	25.1	1.75 (1.14-2.69)*	50/215	23.3	3.79 (2.25-6.39)*
Medium	68/255	26.7	.73 (NS)	32/255	12.5	.75 (NS)	22/255	8.6	1.18 (NS)
High	106/324	33.3		52/324	16.0	1.00	24/324	7.4	1.00
Bridging Social Capital									
Low	109/300	36.3	1.27 (NS)	69/300	23.0	1.53 (.99-2.36)*	64/300	21.3	4.47 (2.44-8.20)*
Medium	66/249	26.5	.80 (NS)	29/249	11.6	.68 (NS)	18/249	7.2	1.29 (NS)
High	76/245	31.0	1.00	40/245	16.3	1.00	14/245	5.7	1.00
Linking Social Capital									
Low	36/128	28.1	.68 (NS)	14/128	10.9	.42 (.23-.78)*	14/128	10.9	.88 (NS)
Medium	87/315	27.6	.66 (.48-.92)*	45/315	14.3	.57 (.38-.86)*	39/315	12.4	1.01 (NS)
High	128/351	36.5	1.00	79/351	22.5	1.00	43/351	12.3	1.00

Note:

1. * = Significant; NS=Non Significant

Table 12: Multivariate relations of HIV risk with Social Capital (Domains) in Mumbai and Ahmedabad

Variable	Casual partners		Sex with CSW		Condom use with CSW	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)
Mumbai						
BO_Overall (Low)	.57 (.36-.92)		.36 (.20-.65)	.42 (.23-.79)		
LI_Overall (Low)	2.14 (1.24-3.67)	2.73 (1.57-4.75)		2.55 (1.29-5.01)		
Workdays in a month (Ref: Low)		1.70 (1.10-2.62)				3.03 (.99-9.29)
Income (Ref: Low)		1.44 (1.07-1.94)		1.69 (1.17-2.44)		
Income same over months or fluctuating (Ref: fluctuating)		2.46 (1.41-4.29)				
Mode of salary receipt (Ref: Daily)				1.52 (1.17-1.97)		1.57 (1.02-2.42)
Ahmedabad						
BO_Overall (Low)			1.85 (1.12-3.05)	1.78 (1.03-3.08)	2.74 (1.52-4.92)	2.27 (1.20-4.31)
BR_Overall (Low)	1.76 (1.17-2.64)	1.79 (1.16-2.75)	2.21 (1.31-3.75)	2.40 (1.36-4.26)	4.74 (2.38-9.44)	6.25 (2.91-13.4)
LI_Overall (Low)	.46 (.28-.77)	.47 (.28-.81)	.19 (.09-.37)	.21 (.10-.44)	.25 (.13-.53)	.30 (.14-.65)
Living with wife or alone (Ref: With wife)		1.86 (1.51-2.31)		2.10 (1.57-2.18)		2.17 (1.54-3.07)
Duration of migration (Ref: Low)		1.29 (1.00-1.66)				1.58 (1.08-2.34)
Nature of job (Ref: Daily wage)		1.42 (1.15-1.75)		1.60 (1.21-2.10)		1.70 (1.23-2.33)
Income (Ref: Low)				1.44 (1.01-2.04)		
Income same over months or fluctuating (Ref: same)		1.93 (1.36-2.76)		2.49 (1.58-3.94)		2.56 (1.48-4.42)
Mode of salary receipt (Ref: Daily)		.76 (.58-.99)		.69 (.50-.93)		.57 (.41-.81)

Note:

- Model 1: Social Capital Domains Only; Model 2: Social Capital Domains and Co-factors
- Only significant associations shown here;
- High value of social capital measures is reference category.

b) Relationship at the component level

The results at the domain level described the relations between HIV risk and social capital in broader terms. Based on results so far, it can be said that in Mumbai and Ahmedabad, high level of overall social capital was associated with lower HIV risk. However, the relationship at the domain level is complex. In Mumbai, social capital was associated with lower HIV risk if they had high linking social capital and was associated with higher risk if they had high bonding social capital. In Ahmedabad, bonding and bridging social capital at high levels were associated with lower risk behaviour while linking social capital at high level was associated with higher risk. The relationship was descriptive in nature. This did not fully explain how high bonding social capital i.e. social support and trust with community members, participation in community activities, put migrants at risk for HIV in Mumbai. Similarly in Ahmedabad, it did not explain how high linking social capital put migrants at risk for HIV. To gain a deeper understanding of the mechanism through which social capital affects HIV risk in migrants, the relationship between social capital and HIV risk was analyzed at the component level. Table 13, 14 and 15 present the results for relationship between HIV risk measures and the components of social capital in migrants in Mumbai and Ahmedabad.

Mumbai:

In univariate analysis, five components of social capital were significantly associated with HIV risk measures in Mumbai (Table 13): ‘personalized trust and help’ and ‘communitarian sense’ components of bonding social capital; ‘participation in bridging

kind of activities' component of bridging social capital; 'personalized trust in services' and 'reciprocal trusting relations with services' components of linking social capital. Low levels of all of them except 'communitarian sense' were associated with higher HIV risk. All these components at low level were associated with 2 to 3.5 times the risk for different measures of HIV risk than high level of social capital for these components. It is interesting to note that though bridging social capital was not significantly associated at the domain level, one component of bridging social capital was associated with higher risk. Those migrants in Mumbai who had lower trust and reciprocity with employers, contractors and shopkeepers had higher risk behaviour. Those who had lower participation in association, charitable organization or other migrants' welfare programs had higher risk. Those who had lower trust in services and who did not receive trust from the services had higher risk in Mumbai.

In multivariate analysis, four components of social capital were significantly associated with HIV risk measures in Mumbai. Low levels of components 'participation in bridging kind of activities', 'personalized trust in services' and 'reciprocal trusting relations with services' were associated with higher risk. Component 'communitarian sense' at low level was associated with lower risk. When the analysis was controlled for sociodemographic characteristics, all four components of social capital remained in the model.

In Mumbai, migrants who had high 'communitarian sense' had higher risk. This was a component of bonding social capital. Bonding social capital might be having negative

association with HIV risk because of the negative effect of this component. Migrants who had high factor score for component ‘communitarian sense’ i.e. those who contributed to community work and helped in solving the community problems, had higher risk. This group could comprise the contractors and masons, the big ‘daddies’ of migrant community in Mumbai. The daily wagers spent most of their time in looking for jobs and working on sites and also had limited resources and might not be able to contribute to the community activities. On the other hand, contractors and masons had time as well as resources to contribute to the community activities and solve the community problems.

Ahmedabad:

In univariate analysis, five components of social capital were significantly associated with HIV risk measures in Ahmedabad (Table 14). Three components at low social capital level were associated with higher risk while two were associated with lower risk. Low levels of ‘differences in community’ and ‘generalized trust in community and approaching for help’, two components of bonding social capital, were associated with higher risk. Low level of component ‘personalized trust in community members and approaching them for help’, a component of bonding social capital, was associated with lower risk. Low level of the bridging component, ‘generalized trust in neighborhood and help’ was associated with higher risk. Low level of ‘trusting relations with services’ was associated with lower risk.

In multivariate analysis of components of social capital and HIV risk measures, four components were associated with all or most HIV risk measures in Ahmedabad. Low levels of social capital in terms of ‘differences in the community members’ and ‘generalized trust in community members and approaching them for help’, and ‘generalized trust in neighborhood and approaching them for help’ were associated with higher risk. On the other hand, one component ‘personalized trust in community members and approaching them for help’ at high level was associated with higher risk. In Ahmedabad, more generalized was the trust; lower was the risk for HIV, indicating that whenever networks went beyond ‘buddies’, the risk decreased. High ‘personalized trust in community members such as contractors and supervisors’ was associated with higher risk because the contractors and supervisors were of the same age as the migrants, and were part of buddy networks.

Table 13: Univariate Relations of HIV Risk with Social Capital (Components) in Mumbai

Measure	Casual partners			Sex with CSW			Condom use with CSW		
				OR (C.I.)			OR (C.I.)		
	n/N	% with risk	OR (C.I.)	n/N	% with risk	OR (C.I.)	n/N	% with risk	OR (C.I.)
BO_Differ									
Low	40/267	15.0	.67 (NS)	23/267	8.6	.63 (NS)	7/267	2.6	.41 (NS)
Medium	43/292	14.7	.66 (NS)	25/292	8.6	.62 (NS)	5/292	1.7	.27 (.10-.75)
High	51/245	20.8	1.00	32/245	13.1	1.00	15/245	6.1	1.00
BO_PerTruHelp									
Low	69/360	53.1	2.08 (1.18-3.66)	38/360	10.6	1.84 (NS)	14/360	3.9	.92 (NS)
Medium	48/278	35.9	1.83 (1.01-3.30)	32/278	11.5	2.03 (NS)	6/278	2.2	.50 (NS)
High	17/166	10.9	1.00	10/166	6.0	1.00	7/166	4.2	1.00
BO_CommuSense									
Low	41/298	13.8	.50 (.32-.77)	16/298	5.4	.25 (.14-.45)	6/298	2.0	.37 (.14-.99)
Medium	33/259	12.7	.45 (.28-.79)	18/259	6.9	.33 (.18-.58)	8/259	3.1	.57 (NS)
High	60/247	24.3	1.00	46/247	18.6	1.00	13/247	5.3	1.00
BO_GenTruHelp									
Low	61/321	19.0	1.37 (NS)	33/321	10.3	.85 (NS)	11/321	3.4	.71 (NS)
Medium	36/230	15.7	1.08 (NS)	17/230	7.4	.59 (NS)	4/230	1.7	.35 (NS)
High	37/253	14.6	1.00	30/253	11.9	1.00	12/253	4.7	1.00
BR_GenTruHelp									
Low	42/236	17.8	1.11 (NS)	24/236	10.2	1.00 (NS)	4/236	1.7	.41 (NS)
Medium	47/293	16.0	.98 (NS)	28/293	9.6	.93 (NS)	12/293	4.1	1.02 (NS)
High	45/275	16.4	1.00	28/275	10.2	1.00	11/275	4.0	1.00
BR_Parti									
Low	69/343	20.1	2.23 (1.36-3.64)	37/343	10.8	2.17 (1.13-4.17)	13/343	3.8	1.58 (NS)
Medium	40/215	18.6	2.02 (1.18-3.46)	30/215	14.0	2.91 (1.47-5.37)	8/215	3.7	1.55 (NS)
High	25/246	10.2	1.00	17/246	5.3	1.00	6/246	2.4	1.00
BR_TruNeighbor									
Low	30/251	12.0	.56 (.35-.91`)	18/251	7.2	.59 (NS)	4/251	1.6	.46 (NS)
Medium	47/260	18.1	.91 (NS)	28/260	10.8	.92 (NS)	13/260	5.0	1.49 (NS)
High	57/293	19.5	1.00	34/293	11.6	1.00	10/293	3.4	1.00
LI_PerTruServ									
Low	86/386	22.3	2.73 (1.57-4.75)	59/386	15.3	3.86 (1.80-8.26)	17/386	4.4	1.60 (NS)
Medium	31/239	13.0	1.42 (NS)	13/239	5.4	1.24 (NS)	5/239	2.1	.74 (NS)
High	17/179	9.5	1.00	8/179	4.5	1.00	5/179	2.8	1.00
LI_Parti									
Low	46/248	18.5	1.11 (NS)	28/248	11.3	1.07 (NS)	4/248	1.6	.32 (.11-.99)
Medium	35/245	14.3	.81 (NS)	19/245	7.8	.71 (NS)	8/245	3.3	.67 (NS)
High	53/311	17.0	1.00	33/311	10.6	1.00	15/311	4.8	1.00

LI_AccesServ									
Low	46/278	16.5	.86 (NS)	23/278	8.3	.60 (NS)	9/278	3.2	.76 (NS)
Medium	48/313	15.3	.78 (NS)	29/313	9.3	.67 (NS)	9/313	2.9	.65 (NS)
High	40/213	18.8	1.00	28/213	13.1	1.00	9/213	4.2	1.00
LI_RelationServ									
Low	84/439	19.1	2.70 (1.43-5.10)	48/439	10.9	3.54 (1.30-9.06)	13/439	3.0	1.48 (NS)
Medium	38/216	17.6	2.44 (1.23-4.84)	27/216	12.5	4.11 (1.60-10.9)	11/216	5.1	2.61 (NS)
High	12/149	8.1	1.00	5/149	3.4	1.00	3/149	2.0	1.00

Note:

1. n=number of migrants with risk behaviour in a particular category;
2. N=number of migrants in a particular social capital level category i.e. low, medium, high
3. NS=Non Significant

Table 14: Univariate Relations of HIV Risk with Social Capital (Components) in Ahmedabad

Measure	Casual partners			Sex with CSW			Condom use with CSW		
					OR (C.I.)			OR (C.I.)	
	n/N	% with risk	OR (C.I.)	n/N	% with risk	OR (C.I.)	n/N	% with risk	OR (C.I.)
BO_Differ									
Low	98/266	36.8	1.52 (1.06-2.17)	63/266	23.7	1.98 (1.28-3.08)	59/266	22.2	5.58 (3.03-10.3)
Medium	73/240	30.4	1.14 (NS)	36/240	15.0	1.13 (NS)	23/240	9.6	2.07 (1.04-4.13)
High	80/288	27.8	1.00	39/288	13.5	1.00	24/288	4.9	1.00
BO_PerTruHelp									
Low	31/173	17.9	.37 (.24-.58)	14/173	8.1	.35 (.19-.64)	11/173	6.4	.43 (.23-.85)
Medium	85/254	33.5	.86 (NS)	50/254	19.7	.88 (NS)	35/254	13.8	1.01 (NS)
High	135/367	36.8	1.00	74/367	20.2	1.00	50/367	13.6	1.00
BO_CommuSense									
Low	60/235	25.5	.66 (.45-.96)	26/235	11.1	.68 (NS)	17/235	7.2	.75 (NS)
Medium	93/273	34.1	.99 (NS)	68/273	24.9	1.82 (1.20-2.78)	52/273	19.0	2.26 (1.37-3.71)
High	98/286	34.3	1.00	44/286	15.4	1.00	27/286	9.4	1.00
BO_GenTruHelp									
Low	97/212	45.8	2.04 (1.40-2.76)	70/212	33.0	2.87 (1.85-4.45)	65/212	30.7	5.75 (3.35-9.87)
Medium	72/302	23.8	.76 (NS)	27/302	8.9	.57 (.34-.96)	11/302	3.6	.49 (NS)
High	82/280	29.3	1.00	41/280	14.6	1.00	20/280	7.1	1.00
BR_GenTruHelp									
Low	110/297	37.0	1.46 (1.02-2.10)	75/297	25.3	2.30 (1.47-3.61)	63/297	21.2	4.36 (2.41-7.88)
Medium	67/239	28.0	.97 (NS)	30/239	12.6	.98 (NS)	18/237	7.5	1.32 (NS)
High	74/258	28.7	1.00	33/258	12.8	1.00	15/258	5.8	1.00
BR_Parti									
Low	72/190	37.9	1.22 (NS)	49/190	25.8	1.52 (.98-2.36)	42/190	22.1	2.83 (1.66-4.80)
Medium	84/319	26.3	.71 (NS)	36/319	11.3	.56 (.35-.88)	28/319	8.8	.96 (NS)
High	95/285	33.3	1.00	53/285	18.6	1.00	26/285	9.1	1.00
BR_TruNeighbor									
Low	100/283	35.3	1.25 (NS)	60/283	21.2	1.13 (NS)	53/283	18.7	3.02 (1.70-5.38)
Medium	78/271	28.8	.92 (NS)	32/271	11.8	.56 (.35-.92)	26/271	9.6	1.39 (NS)
High	73/240	30.4	1.00	46/240	19.2	1.00	17/240	7.1	1.00
LI_PerTruServ									
Low	41/147	27.9	.78 (NS)	15/147	10.2	.53 (.29-.97)	13/147	8.8	1.05 (NS)
Medium	93/293	31.7	.94 (NS)	61/293	20.8	1.24 (NS)	53/293	18.1	2.38 (1.48-3.85)
High	117/354	33.1	1.00	62/354	17.5	1.00	30/354	8.5	1.00
LI_Parti									
Low	86/285	30.2	.83 (NS)	42/285	14.7	.71 (NS)	26/285	9.1	.72 (NS)
Medium	89/287	31.0	.86 (NS)	52/287	18.1	.89 (NS)	43/287	15.0	1.27 (NS)
High	76/222	34.2	1.00	44/222	19.8	1.00	27/222	12.2	1.00

LI_AccesServ									
Low	81/255	31.8	1.10 (NS)	36/255	14.1	.81 (NS)	32/255	12.5	2.04 (1.15-3.64)
Medium	75/219	34.2	1.23 (NS)	48/219	21.9	1.36 (NS)	43/219	19.6	3.48 (2.10-6.05)
High	95/320	29.7	1.00	54/320	16.9	1.00	21/320	6.3	1.00
LI_RelationServ									
Low	20/94	21.3	.47 (.27-.80)	7/94	7.4	.25 (.11-.56)	7/94	7.4	.42 (.19-.95)
Medium	90/314	28.7	.71 (.51-.96)	37/314	11.8	.41 (.27-.63)	27/314	8.6	.49 (.30-.79)
High	141/386	36.5	1.00	94/386	24.4	1.00	62/386	16.1	1.00

Note:

4. n=number of migrants with risk behaviour in a particular category;
5. N=number of migrants in a particular social capital level category i.e. low, medium, high
6. NS=Non Significant

Table 15: Multivariate Relations of HIV Risk with Social Capital (Components) in Mumbai and Ahmedabad

Scale	Casual partners		Sex with CSW		Condom use with CSW	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)
Mumbai						
BO_Communitaraian Sense (Low)	.53 (.32-.86)	.78 (NS)	.31 (.17-.60)	.47 (.24-.92)		
BR_Particiaption (Low)	1.97 (1.19-3.27)	1.90 (1.13-3.19)	1.60 (NS)	1.71 (NS)		
LI_Personal Trust in Services (Low)	2.33 (1.31-4.15)	2.39 (1.29-4.44)	2.45 (1.08-5.52)	2.84 (1.23-6.54)		
LI_Reciprocal Trusting Relations with Services (Low)		2.18 (1.11-4.28)	2.96 (1.11-7.83)	3.10 (1.16-8.31)		
Married or not (Ref: Married)						.16 (.04-.69)
No. of working days in a month (Ref: Low)						3.83 (1.31-11.2)
Income (Ref: Low)		1.67 (1.25-2.23)		1.84 (1.26-2.67)		
Income steady or fluctuating (Ref: Fluctuating)		1.93 (1.08-3.45)				
Mode of salary receipt (Daily)				1.39 (1.07-1.82)		
Ahmedabad						
BO_Differences in community (Low)				2.34 (1.34-4.11)	4.65 (2.39-9.02)	6.71 (3.31-13.6)
BO_Personal Trust and Help (Low)	.36 (.23-.57)	.36 (.23-.58)	.37 (.19-.72)	.30 (.15-.62)	.29 (.14-.61)	.28 (.13-.64)
BO_Generalized Trust & Help (Low)	1.96 (1.34-2.87)	2.03 (1.36-3.03)	2.68 (1.59-4.51)	3.35 (1.88-5.98)	3.38 (1.83-6.23)	4.04 (2.14-7.62)
BR_Generalized Trust & Help (Low)			2.00 (1.17-3.42)	1.90 (1.07-3.37)	2.51 (1.26-4.99)	2.61 (1.27-5.37)
Living with wife or alone (Ref: With wife)		1.77 (1.45-2.17)		2.42 (1.76-3.33)		2.50 (1.73-3.61)
Nature of job (Ref: daily wage)		1.49 (1.21-1.82)				
No. of working days in a month (Ref: Low)				2.77 (1.12-6.88)		
Income (Ref: Low)				1.66 (1.14-2.43)		1.90 (1.22-2.96)
Income steady or fluctuating (Ref: Steady)		1.78 (1.26-2.51)		1.91 (1.18-3.10)		2.31 (1.29-4.14)
Mode of salary receipt (Daily)				.68 (.48-.96)		.61 (.43-.88)

Note:

- The table has results from the final logistic regression models;
- The low, medium and high category of social capital were treated as categorical categories and high social capital category for each component was selected as the reference category;
- Model 1: Social Capital Domains Only; Model 2: Social Capital Domains and Co-factors;
- Only significant associations shown here;
- High value of social capital measures is the reference category;
- BO – Bonding social capital;
- BR – Bridging Social Capital;
- LI – Linking social capital.

Section IV: Summary of Results

1. ***Migration led to different living and working conditions for migrants***

Results demonstrated that migrant was not a homogenous category. Migration meant different things to migrants, even within the same city. In this study, though all migrants came from same region in Rajasthan, the sociodemographic makeup was different for migrants at the two study sites and within each site. These differences determined their lived experiences at destination place which was reflected in differential HIV risk.

There were substantive differences between migrants in the two cities and within migrants in the same city. Kherwadi in Mumbai has more people in the higher age category and married, and with longer duration of migration. More migrants had higher income, more fluctuation in income. The education levels were also higher in Mumbai as compared to Ahmedabad. In Mumbai, married migrants were in a majority. Piplaz in Ahmedabad, on the other hand, had more migrants who were younger and unmarried, had permanent or regular jobs, had more workdays in a month and monthly salary payment.

Similarly, migrants in Mumbai and Ahmedabad also differed on the nature and content of social capital. Bonding and linking domains of social capital had higher values for migrants in Ahmedabad than Mumbai. Bridging social capital was higher in migrants in Mumbai as compared to migrants in Ahmedabad. Social capital in Ahmedabad is characterized by a ‘buddy culture’ while social capital in Mumbai is

shaped by a ‘daddy culture’ due to sociodemographic make-up and nature of migration in the two cities. Migration in Mumbai happened along the chains of family, caste and kinship while migration to Ahmedabad happened through friends and labour agents. Insecurity of jobs in the construction sector and the consequent competition for the jobs affect social relations in Kherwadi Mumbai. On the other hand, migrants in Piplaz, Ahmedabad worked in factories and had secure jobs. As a result migrants in Ahmedabad had higher bonding social capital than migrants in Mumbai. The landlords in Mumbai were from Rajasthan while landlords in Gujarat were local Gujarati people. Migrants in Mumbai also reported better relations with migrants from other states because they worked with migrants from other states. Migrants in Mumbai also maintained good relations with migrants from other states because they exchanged information about jobs from all the migrants. As a result, migrants in Mumbai had higher bridging social capital than migrants in Ahmedabad.

2. Migrants had high risk behaviours in the city and this risk behaviour was higher than villages

The results show a presence of high risk behaviour among migrants in Mumbai and Ahmedabad. Ahmedabad had more people reporting having casual partners (251; 31.6 percent vs. 134; 16.7 percent), having had sex with a sex worker (138; 17.4 percent vs. 80; 10.0 percent) and irregular or no condom use (96; 12.1 percent vs. 27; 3,4 percent) than Mumbai. Migrants were part of three types of open sexual networks in Mumbai and Ahmedabad: sex with female coworkers; sex with sex workers; and relationships with dance bar girls in Mumbai and sex with massage parlor masseuse in Ahmedabad.

There was an increased sexual activity with sex workers in the city. Migrants at destination place had five times higher chances of having sex with a sex worker than villages. More individuals were engaged in high risk behavior in the city. It was not merely the case of migrants continuing their high risk behavior from village to city. Migration specific conditions such as being away from wife, loneliness, city ensuring anonymity, peer pressure, variation in disposable income and easy availability of sex were found to be strongly associated with sex with sex workers in the city.

3. Migration specific conditions were associated with differential HIV risk among migrants

The nature of the job, steady or fluctuating income and mode of salary receipt were the common variables which were significant in both Mumbai and Ahmedabad. Marital status and living with one's wife or alone were significant in Ahmedabad but not in Mumbai. On the other hand, the number of workdays and average income were significant in Mumbai but not in Ahmedabad. There were two significant differences in the nature of the associations in Mumbai and Ahmedabad. A steady income was associated with reduced HIV risk behavior among migrants in Ahmedabad and it was associated with increased risk in Mumbai. Secondly, being paid a lump sum or on a monthly basis was associated with higher risk behavior in Mumbai. In Ahmedabad, those who received their salary on a monthly or contract basis had lower risk than others. The qualitative data suggested that *mistris* in kadiyas (masons) and *thekedars* (contractors) had more high risk behaviour in Mumbai. In Ahmedabad, most migrants (61 percent) earned between 3000 to 5000 rupees (approximately 75 to 125 CAD).

The association between higher HIV risk and a daily or weekly mode of salary receipt might have been a reflection of these migrants having disposable ready money more often than others. In both the cities, age, education, and living in one's own or rented accommodations were not significantly associated with HIV risk behaviour. HIV risk was significantly associated with those characteristics which were migration specific such as living with wife or alone, nature of job (whether permanent or daily wage), number of workdays, differential earnings of the migrants and mode of salary receipt.

4. Social capital was associated with HIV risk but the relationship was not straightforward

Results show a strong relationship between social capital and HIV risk. High overall social capital in Mumbai and Ahmedabad was associated with lower risk for HIV. If the study had used a single measure of social capital like many other epidemiological studies, this study would have concluded that social capital is protective for HIV risk. However, social capital is a complex concept. Several dimensions and facets of migrants' life contribute to their overall social capital. Merely stating that social capital in overall form is protective did not seem sufficient. So, further analysis was undertaken at the level of the domains. In Mumbai, high level of linking social capital was associated with lower HIV risk in migrants. Bonding social capital was significant only in the case of sex with sex worker and high level of it is associated with higher risk. Bridging social capital at the domain level was not significantly associated with any of the risk measures in Mumbai. In Ahmedabad, high level of bonding social capital and bridging social capital were associated with lower risk. But, high level of linking social capital was associated with higher risk for migrants.

In component forms, low level of ‘personalized trust in community members and approaching them for help’ component of bonding social capital, low level of ‘participation’ in bridging kind of activities, and low level of ‘personalized trust in services’ and ‘reciprocal trusting relations with services’ components of linking social capital were associated with higher HIV risk. So, low levels of components of all three domains were associated with high risk behavior for HIV. High level of ‘communitarian sense’ in the community members was associated with higher risk Mumbai. In Ahmedabad, components of respective domains followed similar direction of relationship. The components of bonding and bridging social capital at low level were associated with higher risk for migrants. At the component level, only one component, ‘personalized trust and help’, was associated with higher risk.

So, social capital was associated with the three HIV risk measures in overall, domain and component forms. In overall terms, high level of social capital was associated with lower risk. Most domains and components were protective if the level of social capital was high. High linking social capital, and two components each of bonding and bridging social capital in Mumbai indicated lower risk while in Ahmedabad, high overall, bonding and bridging social capital, and components of bonding and bridging social capital indicated lower HIV risk. Some of the components also behaved differently in two cities. High trust in employers, contractors, shopkeepers and helpful relations with them were protective in Mumbai but not in Ahmedabad. A high trusting relation with services was protective in Mumbai but risk enhancing in Ahmedabad. So, high social capital, though mostly associated with lower risk, may enhance risk for HIV, depending on the nature and context of components of social capital.

CHAPTER 5

Discussion

The overall goal of this study was to contribute to our understanding of the relationship between migration and HIV. To meet this goal, the study identified four objectives: to describe the migrant population in terms of its sociodemographic and migration characteristics and social capital; to explore migrants' HIV risk behaviours; to explore the relationship of HIV risk with migrants' sociodemographic characteristics; and to explore the relationship between HIV risk and social capital. The study has met its objectives and the findings have research, programmatic and policy implications for migration and HIV in India.

This chapter presents a discussion of the study findings and related research, program and policy implications. The chapter has been divided into three sections. Section I comprises the discussion on migration, social capital and HIV risk behaviour in the context of the study framework, objectives and findings along with the study strengths and limitations. Section II comprises a detailed discussion of research, programmatic and policy implications of the study. The chapter ends with delineation of some possible future steps.

Section I: Migration, Social capital and HIV Risk

The migration-HIV framework developed for this study (Chapter 2) stipulates that all migration does not lead to HIV and that the relative contribution of migration to the spread of HIV depends on several factors. The foremost factor among these factors is

that migration happens across regions which have differences in terms of HIV prevalence. Suppose the migration is short-term and happens across small distance between places which have zero or similar prevalence, migration may have no relation with HIV risk for migrants or HIV spread across the origin and destination places. The second factor relates to whether migrants have high risk behaviour at destination place or not, and whether the sexual networks they form at the destination and origin places are open or closed. Another important factor is the frequency of circularity of migrants between the origin and destination.

Migration from villages of Rajasthan to Mumbai and Ahmedabad connects low HIV prevalence areas with higher HIV prevalence areas. Rajasthan is a low prevalence state while Gujarat and Maharashtra are medium and high prevalence states, respectively. As per 2006 estimates, the HIV prevalence was 2.6, 19.6 and 6.4 percent among sex workers in Rajasthan, Maharashtra and Gujarat, respectively (NACO, 2006). This study shows that migrants engage in high risk behaviour at destination place. The risk behaviour among migrants in this study falls between the risk behaviour reported in other studies in India. In a study among migrants in Surat, Gujarat, sex with sex worker was reported by 2.3 percent and sex with other casual partner was reported by 13.7 percent (Gupta and Singh, 2002). Based on a study among migrants from Bijapur, Karnataka, Halli and colleagues (2007) have reported higher levels of risk behaviour among migrants. Fourteen to 29.4 percent among married men and 10.8 to 30.5 percent among unmarried migrants reported visiting sex workers at destination place.

High risk behaviour among migrants in Mumbai and Ahmedabad is not merely a continuation of the risk behaviour in village to cities. Migrants' HIV risk behaviour at destination place is very high as compared to the HIV risk behaviour in villages. Migrants have five times the risk of having sex with a sex worker in the city as compared to their chances of having sex with a sex worker in the village. The sexual networks at the destination place are open. Migrants have sex with sex workers and co-workers who have sex with other migrants as well. The findings from this study of migrants in Ahmedabad are similar to another study undertaken among migrants in Surat, Gujarat (Gupta and Singh, 2002). The migrants in Surat also talked about their sexual relations openly and a substantial number of them had relations with coworkers and sex workers. The focus group discussions and in-depth interviews undertaken in this study show that migrants visit their villages at least 2-3 times a year. The three criteria in the migration-HIV model (presented and discussed in Chapter 2) i.e. migrants having high risk behaviour at the destination place, open sexual networks at the destination place and high circularity between rural and urban areas are met in this study population. The nature of sexual networks and sexual structures in villages will determine the course of the epidemic in Shekhawati region. So far, it seems that the sexual networks are closed. The prevalence in migrants and spouses is 1.14 and 1.04 percent, respectively (ICHAP, 2005). The prevalence among ANC attendees is .30 percent in Sikar district, hinting at a truncated epidemic.

This study shows that migration specific conditions are associated with increased sex with sex workers at destination place as compared to their native villages. Loneliness and easy availability of sex in the city are related with higher chances of having sex with sex workers in both the cities. Loneliness is associated with three times higher

risk for sex with sex workers in Mumbai while easy availability of sex in the city is associated with ten times higher risk for having sex with sex workers in Ahmedabad. In addition, being away from wife, alcohol consumption, city ensuring anonymity and to forget hardship and stress are significantly associated with sex with sex workers in Mumbai while lack of social engagement and variable disposable income are significantly associated with sex with sex workers in Ahmedabad. Factors such as being in a man's nature to have regular sex and having sex with sex worker being a sign of manliness are not associated with sex with sex worker. So, it is evident that migration specific characteristics are related with looking for sex with sex worker at the destination. The literature shows that for migrants, the destination place is a new world with old social structures ruptured and new social structures yet to be understood and negotiated. Factors such as loneliness, variations in disposable incomes, peer pressure, recreational options, and freedom from social norms may encourage people to take risks which leave them vulnerable. Poudel and colleagues (2004), in a study among Nepali migrants to India, found that peer norms and pressure, cheaper sex, lack of family restraint and drinking alcohol were the factors that influenced migrants' high risk behaviour at destination place. Wolffers and colleagues (2002) have reported three factors that influence migrants' sexual behaviour: ways to deal with their sexual needs in a context of relative freedom; dependence on others such as peers or sexual partner; and migrant identity that emerges to deal with the expectation of community back home on the one hand, and the opportunities and needs at destination place. Mobile populations are often marginalized, which results in low self-esteem and short-term survival strategies. The instability of mobility also increases the vulnerability of the migrants at the

destination place (Brockerhoff and Biddlecom, 1999; UNAIDS, 2001; Wolffers and Painter, 2002; Wolffers et al., 2002; Crush et al., 2005).

The literature review on migration and HIV risk also stipulates that all migrants do not have high risk behaviour. Why some migrants have high risk behaviours and not others has not been scientifically studied in India. The key to an understanding of the differential HIV risk among migrants' lies in the understanding of migrants' lived experiences at destination place. Migrants' lived experience at destination place are determined by migrants' sociodemographic characteristics, living and working conditions and organizations of their social relations with fellow community members, local people at destination place and government services.

A typical profile of migrants, based on the literature on migration in India (De Haan, 1997; Haberfeld et al., 1999; Skeldon, 2003; Deshingkar and Start, 2003; Dubey et al., 2004; Singh et al., 2004), shows that the majority of the migrants cluster in the 16-40 years age group, and the proportion of this age-group is even higher among the seasonal and circular economic migrants. The migrant workers are crowded into the lower ends of the labour market and have few entitlements vis-à-vis their employers or the public authorities in the destination areas. The majority of the migrants works in the informal sector and lives in slums. There are rarely provisions of safe drinking water or hygienic sanitation. They have meager personal assets and suffer a range of deprivations in the destination areas. Migrant laborers live in deplorable conditions. Laborers working in harsh circumstances and living in unhygienic conditions suffer from serious occupational health problems and are vulnerable to disease. Migrants

cannot access various health services due to their temporary status. Free public health care facilities and programs are not accessible to them.

This generic profile matches with the sociodemographic, living and working conditions of migrants in Mumbai and Ahmedabad in this study. Most migrants were male and most migrants migrated without families. All of them worked in the informal sector. Most migrants lived as tenants. Living and working conditions in both the cities were tough. Migrants were mainly in the age group of 18-35 years. Both places had 'chain' migration. Earlier migrants helped new migrants in moving to cities. People came to the city through their friends, relatives or villagers. The profile of the migrants in this study also matches with migrants in Delhi (Singh, 2001). The migrant workers worked for 12 or more hours in Wazirpur Industrial area in Delhi. The living and working conditions in Delhi were similar to the conditions in Mumbai and Ahmedabad. Migrants reported drinking and sex as the two of the few diversionary activities available to them amidst tough living and working conditions in Delhi.

Although, migrants in Kherwadi, Mumbai and Piplaz, Ahmedabad conformed to the generic profile presented above; there were substantial differences in migrants in the two cities and within the same city. Kherwadi in Mumbai had more people in the higher age category, with longer duration of migration, higher income and more fluctuation in income. In Mumbai, people had more education and more people were married. Piplaz in Ahmedabad, on the other hand, had more migrants who were younger and unmarried, lived with their wives as compared to Mumbai, had

permanent or regular jobs, had more workdays in a month and monthly salary payment.

The differences among migrants were associated with HIV risk. In Mumbai, there was a group of migrants who earned considerably more than the rest of the migrants (21 percent of the sample in Mumbai), had a higher number of workdays (generally getting work for more than 20 days in a month), had a permanent job, received a salary on a contract basis or monthly basis and earned steady income every month. All these factors were associated with higher risk. This was the group which seemed to have higher HIV risk behaviours than those who made a daily wage, who had lower and fluctuating incomes. On the other hand, in Piplaz, Ahmedabad, the main characteristics that stood out included a majority being young, unmarried and living without their wives. This brigade of young migrants had higher HIV risk than those who were married and lived with their wives. In a study among migrants in another town of Surat of Gujarat, Gupta and Singh (2002) found similar patterns of HIV risk; those who were unmarried and living alone or living with friends visited sex worker more than others. In a study among men attending STD clinic in Pune, Shepherd and colleagues (2003) found that most of the attendees belonged to working class migrants, mostly unskilled. Income, marital status, living away from family and speaking a language other than Marathi and Hindi were associated with higher STD prevalence. In another study in STD clinic attendees in Pune, Bentley and colleagues (1998) found that those who were not living with their spouses were at 2.5 to 2.7 times higher risk than those who lived with spouse.

The nature of the job, steady or fluctuating income and mode of salary receipt were the common variables which were significantly associated with HIV risk in both Mumbai and Ahmedabad. Marital status and living with one's wife or alone were significant in Ahmedabad but not in Mumbai. On the other hand, number of workdays and average income were significant in Mumbai but not in Ahmedabad. Migrants in Ahmedabad were employed in factories and workdays were similar for most and earnings also ranged between 3000 rupees to 5000 rupees for majority (61 percent), so it makes sense that these factors were not the deciding factor for HIV risk in Ahmedabad. But there were important differences among migrants in terms of number of workdays and average income in Mumbai hence they were significant in Mumbai.

There were two significant differences in the nature of the associations that were examined. A steady income was associated with reduced HIV risk behavior among migrants in Ahmedabad and it was associated with increased risk in Mumbai. Secondly, being paid a lump sum or on a monthly basis was associated with higher risk behavior in Mumbai. In Ahmedabad, those who received their salary on a monthly or contract basis had lower risk than others. The qualitative data suggested that *mistris* in kadiyas (masons) and *thekedars* (contractors) had higher high risk behaviours in Mumbai. In Ahmedabad, most migrants (61 percent) earned between 3000 to 5000 rupees (approximately 75 to 125 CAD) and association between high risk and a daily or weekly mode of salary receipt might be a reflection of disposable ready money more often than others.

HIV risk was significantly associated with those characteristics which were migration specific such as living with wife or alone, nature of job (whether permanent or daily wage), number of workdays, differential earnings of the migrants and mode of salary receipt. In both the cities, age, education, and living in one's own or rented accommodations were not significantly associated with HIV risk behaviour.

Based on the discussion so far, it is clear that migration is strongly associated with heightened HIV risk behaviour and this increase in high risk behaviour is related to the migration-specific conditions at destination place. The study also shows that migrants have substantial differences in terms of their sociodemographic characteristics, living and working conditions, which, in turn, inform their chances of having HIV risk.

This is a first of its kind study in India where social capital construct has been used as an explanatory framework to understand migrants' HIV risk in the context of migration. The specific context of this study was migration from low prevalence Northern state of Rajasthan to higher prevalence destination places in Mumbai and Ahmedabad in Western India. Social capital is closely related with migration. Social capital facilitates migration through chain migration. On the other hand, migration leads to the erosion of social capital due to a geographic move or living in a different state and region from where one grew up leading to loss of social networks, loss of social support structures and isolation. Social capital is not only dependent on migrants' own initiatives in forming relations and forging linkages with services and authorities but also on the nature and resourcefulness of the networks and linkages

they join or form. As a result, social capital is not a homogenous resource that is equally created, sustained and accessed by all members of a particular community.

In this study, social capital of migrants in Mumbai and Ahmedabad was shaped by the organization of social relations vis-à-vis three central facets of migrant life: migration process; community life; and work life. The context specific organization of social relations in the two study sites gave rise to what could be called a 'buddy culture' in Ahmedabad and a 'daddy culture' in Mumbai. Most migrants in Ahmedabad were young and unmarried. Most of them had been in the city for less than 5 years. They lived with their friends as roommates. The factory owners gave responsibility of hiring and managing the labour to labour contractors. Migration happened through labour contractors and friends. Migrants worked in cloth factories, which employed 1000 of young men and women who spent twelve hours together everyday except on Sundays. Work involved cloth measuring, dyeing, folding and loading, which required no traditional or specialized knowledge; thus motivating young people from diverse villages in Shekhawati, Rajasthan to migrate to Piplaz for better economic opportunities. The loss of family and community ties was compensated by forming friend-based networks; thus engendering a buddy culture. On the other hand in Mumbai, migration has had a long history and most migrants were employed in construction sector or in carpentry, the professions traditionally undertaken by the members of certain castes. Migration happened on the line of family, kinship and caste. In many cases, a son or younger brother joined his father or elder brother. In Mumbai, people lived with their relatives, father or brother. A person became a contractor at an advanced age after he had worked in the field for many years and had

enough money to take contracts. So, there were always some known senior migrants around either as a roommate or as an employer/contractor.

In both cities, there was a generalized sense of trust in community members. In spite of a certain level of 'generalized sense of trust' in the community; trust and reciprocity were much more '*particularized*' in Mumbai. There were several small concentric '*pockets of trust and reciprocity*'. There was a broader identity of being Rajasthani migrant which connected them to each other. However, the thicker ties encompassed relationships involving family members and relatives in Mumbai and friends, co-workers and room partners in Ahmedabad. Based on a study in Luton town, England, Campbell (2005) also found that the generalized trust in the community was low and the small face-to-face groups of people involving friends, relatives, neighbors were more important. People's involvement in formal voluntary organizations was also low; rather they participated more in informal networks of friends and neighbors. Similar to migrants in this study, people felt stretched in their day-to-day life in making ends meet and did not have time, energy or interest in participating in formal organizations or community affairs. In a study of sources and types of social capital in Peru, Silva and colleagues (2005) also found that compared to the contribution of connections of individuals to the overall social capital, the contribution of community organizations was small. In times of need, people turned to individual connections more than the community organizations. Migrants in this study also reported similar kinds of relationships. They shared a common Rajasthani identity and there was a generalized sense of trust and reciprocity but more important were their relations with family members, room partners or employers and contractors.

Work life was organized in such a way that migrants in Ahmedabad had more opportunities to interact and form relations with large number of people than migrants in Mumbai. Migrants in Ahmedabad also had more free time at their disposal. In Ahmedabad, 500-1000 migrants spent twelve hours together at work. They lived very near to the factories. They had one weekly day off on Sunday. Migrants in Mumbai worked on construction sites or carpentry sites, each site employing 10-25 migrants on average. The work sites were not fixed. Migrants had to go to different parts of the city to work on construction sites. Migrants spent traveling for two to three hours everyday. Migrants in Mumbai had only one day off in a month on the day of *amavashya* (no moon day). In Mumbai, it also seemed that social relations got strained due to competing for same or similar types of jobs. In Ahmedabad, migrants had more or less secure jobs. As a result, migrants in Ahmedabad had more time together as well as more time for sociability compared to migrants in Mumbai, resulting in higher social capital in most forms except for bridging social capital. Migrants in Mumbai had higher bridging social capital than migrants in Ahmedabad. Comparatively, migrants had better relations with their landlords in Mumbai than Ahmedabad. The reason was that the landlords in Mumbai were Rajasthanis while landlords in Gujarat were local Gujarati people. Similarly, migrants in Mumbai had better relations with migrants from other states than Ahmedabad. This was mainly because migrants in Mumbai worked with migrants from other states and exchanged information about jobs from all the migrants including migrants from other states. In addition, they also worked with contractors from other states.

Migrants had more social capital in Ahmedabad than Mumbai. The content and quality of social capital in the two study communities were also different. Social capital, in most domain and component forms, was associated with HIV risk measures but owing to the difference in content and quality of social capital among migrants in Mumbai and Ahmedabad, the relationship was complex. High levels of overall social capital, bridging social capital and components of bridging social capital were associated with lower HIV risk behaviour in both the cities while high level of linking social capital was associated with lower HIV risk in Mumbai and higher HIV risk in Ahmedabad.

The reason for the complex relationship between social capital and HIV risk was the qualitative difference in the makeup of social capital at the two study sites. HIV risk in Ahmedabad was conditioned by buddy culture while HIV risk in Mumbai was mediated by daddy culture. Most migrants in Ahmedabad were young (70 percent were below the age of 25 years). The contractors and supervisors were also young. Most of them had been in city for less than 5 years. They lived with their friends as roommates. Renting a television and VCR was common and mostly pornographic movies were watched. Friends knew about each other's sexual relations. In a study in Surat, Gujarat, Gupta and Singh (2002) also found a non-familial kind of networking among migrants. The networks among migrants involved homogeneity in the age group and other behavioral characteristics. Decosas and colleagues (1995) report that a 'culture of maleness' develops among young, single male migrant. Kunitz (2004) also reports that in absence of social control, a 'youth culture' might develop and lead to high risk behaviour among youth. In another study among Indian origin migrants in the city of New York, the buddy culture extended to helping a friend to connect to sex

workers by sharing information on places and addresses of sex workers (Bhattacharya, 2005). On the other hand in Mumbai, the presence of senior members of community or family members acted as a social sanction and control mechanism for the younger migrants. This explained why high level of 'personalized trust in community members i.e. employers/contractors and approaching them for help' was associated with lower risk in Mumbai while in Ahmedabad, it was associated with higher risk as the contractors and supervisors belonged to the same age-group. Migrants in Ahmedabad had higher scores for three components of linking social capital than migrants in Mumbai. They had better personalized relations with services, their access was better and the trust with services was reciprocal. However, the scores for one component 'participation in linking kind of activities' were higher for migrants in Mumbai indicating that migrants had better relations with their elected representatives, influential persons and higher participation in voting than migrants in Ahmedabad. Linkages with influential people of community and elected representative might have played a role of 'sanctions and control', leading to its protective role in Mumbai. On the other hand in Ahmedabad, relations with service providers played no such role as the service providers were from local Gujarati community, and mostly in private sector.

What was interesting in Ahmedabad, though, is that when the relations were beyond the immediate buddy networks, the effect of social capital was different. High level of 'generalized trust in community' was associated with lower risk in Ahmedabad. More bridging kind of relations also took the relations beyond buddy networks. High level of bridging social capital at the domain level as well as the component level was associated with lower risk in Ahmedabad. Cattell (2001) has also reported that more

varied networks provided greater range of resources and had greater potential benefit for health. Kawachi (2006) reports a study in a disadvantaged community in Birmingham, Alabama by Mitchell and LaGory where bonding and bridging social capital had inverse effects. Bonding social capital was associated with higher mental stress while bridging social capital with lower mental stress.

Within social capital and HIV literature, most field based studies have shown that the relationship between social capital and HIV risk is complex. The nature and content of social relationships and networks are important to understand the relationship between social capital and HIV risk. All relations do not provide the same level of resources nor do they have the same type of effect. Studies have shown that within the same community membership in certain groups is associated with reduced HIV risk while membership in other groups with increased risk. In a study in South Africa, Pronyk and colleagues (2008) found that greater levels of cognitive social capital were largely protective for men for HIV risk but household levels of structural social capital did not play a very significant role. For women, both cognitive and structural social capital played a significant role in shaping their HIV risk. However, higher levels of structural social capital were also associated with higher HIV prevalence and incidence among young women. Gregson and colleagues (2004) found that those women who were members of youth groups were more likely to have avoided HIV while women who were members of political parties or saving clubs were in greater danger of acquiring HIV. Similarly, based on a study in the township of Khutsong in the Carletonville, South Africa, Campbell and colleagues (2002) reported that the relationship between social capital and sexual health risks including HIV/AIDS was complex – while some results were positive, some others were in the negative

direction. Hence, their main conclusion was that all organizational memberships did not result in safer sexual behaviour. The nature of membership is also equally important. For example, belonging to a church reduces the likelihood that men will have casual partners and that older men will drink alcohol, while belonging to a sports club reduces the likelihood that young men will be HIV-positive. On the other hand, for both men and women, *stokvel*[14] membership was associated with increased sexual health risks. Portes (1998) has outlined four negative consequences of social capital: exclusion of outsiders, excess claims on group members, restrictions on individual freedoms, and downward leveling norms. One negative effect can be seen in Mumbai and Ahmedabad each. In Mumbai, many migrants reported that they did not work for or hire people from their own Rajasthani community. The reason cited involved excess claims by the fellow community members. In Ahmedabad, 'buddy culture' among young migrants led to involvement in high risk behaviour as a form of downward leveling of norms. Whenever this buddy culture was extended beyond within community relations to inter-community bridging kinds of relations; HIV risk decreased.

The study has made several original contributions in the field of migration, social capital and HIV risk. For the first time in India, this study has explored HIV risk behaviour in migrants from northern India. Also, most publications on migration and HIV risk outline various factors that may be related to migrants' vulnerability for having sex with sex workers such as loneliness, living away from family, stress of

[14] Stokvels are places where people meet on a regular basis and contribute a small sum of money to a common pot and members take turns to take home the pot. The business side of the meetings is accompanied by a social gathering, usually involving the sale and consumption of alcohol. The result is that poor people periodically have access to a relatively large sum of money and the context involves bonhomie and alcohol consumption.

migrant life etc. This study has empirically tested these vulnerability factors. Migration life specific social situations such as loneliness, anonymity of city life, being away from wife, easy availability of sex in city and lack of social engagement were associated with risk behaviour of having sex with a sex worker at destination place.

This is a first study of its kind at the global level and in India where social capital approach has been employed to understand differential HIV risk among migrants. The study used mixed methods for an enriched understanding of social capital. The qualitative data not only enriched the understanding of social capital in migrants but also helped to explain the complex relations of social capital with HIV risk at the domain and component levels. The study used the multidimensional construct of social capital in a field based study and measured bonding, bridging and linking social capital. In total, 75 questions were used to capture different components and forms of migrants' social capital. The reliability statistics confirmed that four, three and four components belonged to bonding, bridging and linking social capital, respectively. This study, for the first time in epidemiological research, was able to explore the mediating effect of social capital on HIV risk at bonding, bridging and linking domain level. Most of the domains and components of social capital are significantly associated with migrants' HIV risk measures.

The study has some limitations as well. The study design to test for the relative risk in migrants in origin and destination places is not ideal. Ideally the migrants' risk should have been compared to non-migrants in a case-control study design. However, the study timelines and budget did not allow for data collection in non-migrants in

villages of Rajasthan. Because of this limitation, it might be speculated that had migrants gone on living in rural areas, they might have had the same level of risk behaviour as migrants at destination place. However, it can be argued that migrants' behaviour at the pre migration stage can be taken as a proxy for the behaviour of non-migrants. No data is available on migrants' sexual behaviour before migration in villages in India. In a prospective study in Zimbabwe, Mundandi and colleagues (2006) found no difference between risk behavior of non-migrants and future migrants, indicating that the risk behaviour before migration can be taken as proxy for risk behaviour in the villages in spite of the future migrants being younger, better educated and more likely to be single than the non-migrants. The high risk behaviour among migrants in both the cities was so high as compared to the high risk pre migration that it could not be simply attributed to the less time spent in villages. There are no established sex work sites in the villages of Shekhawati. There is evidence that men in general have lower number of partners in northern states as compared to southern states (Kumar et al., 2006). National baseline survey by National AIDS Control Organization in 2001 showed that 15-19 percent of men and 7 percent of women in southern states had non-regular partners in the past year compared to 4-5 percent of men and .5-1 percent of women in Orissa and Rajasthan (Chandrasekaran et al., 2006). In addition, the opportunities and motivations to engage in high risk behaviour in village are limited. Strict social control of the villagers, codified normative behavioral expectations and lack of privacy are some of the factors which inhibit high risk behaviour in villages (Decosas et al., 1995).

Studies have shown that social capital is a contextual construct and plays a role beyond the level of individual characteristics and individual level social capital

(Kawachi et al., 1999). Cattel (2001) write that neighborhood characteristics such as employment history, facilities, housing, opportunities for casual meeting and perceptions about the neighborhood such as reputation of the area play an important role in social capital formation. Kim and Kawachi (2006; 2007) and Kim, Subramanian and Kawachi (2007) have reported social capital's effect on health at the individual level as well as state level in the United States. Silva and colleagues (2005) also reported that "social capital is multidimensional and culturally specific concept and is dependent upon the specific norms of behaviour, networks and organizations that characterize a given setting". Poortinga (2006) found that positive effect of social capital on health at individual level was more pronounced in countries which had higher overall social capital. In this study, the data was collected at the individual level at the two study sites, making it statistically untenable to undertake a multi-level analysis to test for extra-individual and contextual effects. Instead, qualitative data was collected to have an enriched contextual understanding of migrants' lived experiences and social capital.

Based on a study in Luton town, England, Campbell (2005) observes that the resources existing in a community might be fewer and might take a different form, than is commonly assumed by social capital advocates. There could be resources which are there in a community but the researcher could be oblivious to them because of her or his preconceived notion of what constitutes social capital and what does not, based on her or his reading of social capital literature. As this was a first study of its kind among migrants in India, it could have been possible that some aspects of migrants' social capital were not fully captured in this study. For example, the survey data was collected on migrants' participation in formal organizations and associations.

The survey items on membership in formal organizations did not remain in the model during factor analysis. The survey data on friend based informal associations could have been collected to supplement the qualitative data on intra-group social dynamics of buddies and daddies. There is also a suggestion that the survey method is not a suitable method to capture the complexities of social capital (Taylor, 2006). The study employed mixed methods and tried to capture the components of social capital through survey and social context through qualitative methods. The qualitative data helped in explaining some of the complex associations that social capital has with HIV risk variables.

Section II: Research, Programmatic and Policy Implications

There are more than 200 National AIDS Control Organization (NACO) funded targeted interventions among migrant workers. All the existing HIV prevention programs for migrants are in urban areas and are run by host State AIDS Control Societies. In addition to NACO, the ILO New Delhi[15] office has also developed a workplace HIV/AIDS program in consultation with Government, employers' organizations, workers' organizations and NACO. The targeted interventions among migrants in India are implemented by local nongovernmental organizations (NGOs). Local NGOs generally use the generic material produced for local populations in local language. NGOs hire local workers who are not very familiar with migrants' language and culture. The linguistic and cultural differences may impact the effectiveness of these interventions. This could be a reason behind the low trust in NGOs reported by participants in this study. Most of the initiatives by ILO are with government

[15] International Labour Organization, ILO – India HIV/AIDS Project, http://www.ilo.org/public/english/region/asro/newdelhi/aids

departments, private enterprises and trade unions and cover mainly the organized sector workers. It has taken an initiative among informal sector workers in collaboration with Central Board for Workers Education but the programme is limited to providing HIV/AIDS education. Migration acts as a bridge between origin and destination places. There is a continuum of risk. NACO's targeted interventions in urban areas do not cover the migration continuum.

The study shows that migrants from Shekhawati region in Rajasthan have high risk behaviours at destination place. This HIV risk behaviour is substantially higher than their risk behaviour in villages. The study supports NACO's renewed focus on migrants as an important population group for HIV prevention in India. As of now, the HIV epidemic is truncated in Shekhawati region but can lead to a concentrated epidemic if effective programming is not undertaken. The study also shows that migration is not a homogenous category. Migrants within the same community differ from each others in significant ways. These differences impact their HIV risk. It is imperative to understand migrants' lived experiences for successful HIV prevention among migrants.

Based, on the study findings, some policy suggestions are as following:

1. Migrant workers are employed in the construction sector in Mumbai and in textile factories in Ahmedabad. Most migrants are not covered under any health or social security provision. They are also excluded from most of the government schemes and programs. Hence, a national policy for migrant workers' health and social security should be formed and adopted at the national level.

2. The study shows that more migrants had sex with sex worker in city as compared to sex with sex worker in village. The potential migrants in high out-migrating areas should be exposed to information about HIV and life at destination place so as to prepare them before they leave the villages.
3. To make migration less vulnerable, one suggestion could be to try to create such conditions in the underdeveloped regions so as to reduce 'distress' migration. This could be done through identifying the areas of high out migration and having some income support programs there.
4. The study shows that those living with their wives have lower chances of having casual partners or sex with sex worker. Reasons for not keeping their wives and children with them include high cost of living in cities, congested living conditions and lack of basic amenities. Hence, policies which promote family migration should be encouraged. Cheap housing should be arranged in areas with large concentration of migrants. And if that is not possible then steps should be taken to increase the connectivity with the family through subsidized pre-paid calling cards, concessions in traveling etc.

The Migration-HIV Risk Model, presented in this study, provides an innovative framework that can be applied to different regions which have substantial migration and varying epidemic stages to have a scientific understanding of migration-HIV risk dynamics in different parts of India. More research and mathematical modeling can elucidate the interplay between migration and HIV in India.

In theoretical terms, there could be three kinds of social capital interventions: generalized; thematic and overarching policies. Under generalized social capital

policy framework, a holistic program aimed at addressing overall social capital in the community, is undertaken. The principle behind this approach is that higher overall stocks of social capital will generate positive externalities in the forms of public good, services and relations which will be available to all members of the community. The thematic approach is centered on some identified theme or problem. The underlying principle is that we should not unnecessarily tinker with existing social network and relations of a community and should only intervene where the need is. For example, Krishna [2003] found that villages in Rajasthan, India had high levels of bonding and bridging social capital but lacked linkages with the government development schemes. Hence, a thematic approach i.e. enhancing linking social capital between the village community and government functionaries/structures will be the ideal and cost-effective approach in this case. Overarching policies are beyond the community and require the involvement of several policy levels. The interventions are generally at the policy level which affect an entire population.

Migration specific conditions such as loneliness, alienation and city life ensuring anonymity were found to be associated with increased HIV risk at destination place. Migrants experienced alienation and loneliness at the destination place which they said was one of the main reasons behind their drinking and visiting sex workers. The responsible factors were that they ware away from families; there was not much to do in the evenings; there were no recreational and social engagement opportunities in the community. The policy suggestion is that the bonding social capital be increased in the community through creation of public spaces/community centre for public engagements, meeting, recreation; periodical cultural activity in their language; promoting the culture of collective celebration of personal occasions of joy etc. To

counter loneliness, alienation and anxiety about family, communication and interaction with the families and wider community back in the villages could be enhanced through:

a. giving cheaper pre-paid calling cards;
b. giving them concessions in transportation to enable their visits to their families more frequently.

Anonymity of the city life gave them a feeling of freedom as no one was watching and no one was going to report to family and community back in the village. To address the anonymity issue in a big city like Mumbai with a population of approximately twelve million is a difficult task, however, interventions aimed at a mix of bonding and bridging social capital may address the issue to a certain level. Bonding social capital also refers to cultural and normative patterns which translate into behavioral expectations, control, and social sanctions. The community at destination place is different than the community at origin place. It is transitory in nature, with little formal or symbolic leadership/authority structures which result in lack of control of members' behaviour. Hence, interventions aimed at bonding social capital will help address this issue. Bridging social capital interventions in the form of migrants' integration programs with the host communities and migrants from other states will help migrant and host community know each other better and will address the anonymity issue to a certain degree. Varhsney [2000] found that the cities where intercommunal relations were better; had less communal flare-ups. In a similar way, intercommunal relations and networks could help the relationship between the migrant communities and the host communities, and migrants will not be seen as 'outsiders' and as a burden on local resources. This study shows that bridging social

capital in overall as well as component forms is strongly associated with HIV risk measures in both the cities. Higher levels of overall bridging social capital and its components are associated with lower HIV risk in both cities. Enhancing bridging social capital to foster trusting and reciprocal relations with local host community and migrants from other states will not only reduce HIV risk in migrants, it will also help solve many other problems related to living and working conditions that migrants face in the cities.

High level of overall social capital is associated with lower risk for HIV in both the cities. So, a generalized intervention to increase social capital to reduce HIV risk could be made. However, as mentioned above, social capital is a complex concept and encompasses different forms of social relations; all of which may not have protective role. For example, the study shows that high level of linking social capital in Ahmedabad is associated with higher risk while higher levels of bonding and bridging social capital are associated with lower risk for HIV. Linking social capital behaves differently in two cities. Lower linking social capital decreases risk in Mumbai but is related with higher risk in Ahmedabad. Hence, whereas bonding and bridging social capital should be enhanced in a generalized mode; intervention for linking social capital should be the thematic, depending upon the social context. The component 'personalized trust in community members' of bonding social has inverse relations in Mumbai and Ahmedabad. In Mumbai higher trust in community members lowers the risk while in Ahmedabad, it increases the risk. In Mumbai, people live with their relatives, father or brother. This explains why high level of 'personalized trust in community members i.e. employers/contractors and approaching them for help' is associated with lower risk in Mumbai while in Ahmedabad, it is associated with

higher risk as the contractors and supervisors are of the age of other average migrants. When the relations are beyond the immediate buddy networks, the effect is different. High level of 'generalized trust in community' is associated with lower risk in Ahmedabad. More bridging kind of relations also take the relations beyond buddy networks. Bridging social capital at domain level as well as components level is protective if the levels of bridging kind of social capital are high. However, the same logic does not explain the association of high levels of linking social capital with higher risk. It will be prudent to have a thematic intervention to increase the personalized trust in Mumbai while in Ahmedabad, 'personalised trust' has to be democratized so as to break the buddy culture. The present study suggests that the best model of social capital for migrants at destination place is a mix of generalized and thematic interventions. The nature of interventions has to be decided on the basis of a contextual understanding of the content and quality of social capital, and relationships of different components and domains of social capital with HIV risk.

The study shows that social capital, in domain and components forms, is associated with HIV risk. Social capital remained statistically significant even after controlling for other possible explanatory factors such as sociodemographic characteristics. It shows that social capital is strongly and uniquely associated with migrants' HIV risk. Social capital should be an integral part of research and prevention programs on migration and HIV. However, a blanket recommendation to increase social capital for HIV risk reduction is not supported by the study findings. Rather, a multi-dimensional construct of social capital should be used to understand the mechanisms and pathways through which migration enhances migrants' vulnerability to HIV risk. Social capital should be measured at the baseline. As the association of social capital with HIV risk

is complex, not only the quantity but quality of social relations has to be measured. As we know social capital is dynamic, social capital measurements should be done periodically and corresponding changes in social capital domains and components should be incorporated in the program design.

Section III: Conclusion and Way Forward

There are approximately 200 million migrants in India, out of which 80 million are long-distance interstate migrants (Skeldon, 2003; Srivastava and Sasikumar, 2003). This migration is usually circular in nature with migrants periodically moving back and forth between the origin and destination places. NACO has recognized migrants as an important population group in its HIV prevention efforts in India. However, in spite of the accumulating evidence that HIV prevalence is spreading into low prevalence rural areas in erstwhile low prevalence states, evidence to understand the migration and HIV dynamics is limited in India (Singh, 2001; Gupta and Singh, 2002; Halli et al., 2007).

The Migration-HIV Framework proposed in this study (Chapter 2) outlines various scenarios of the migration and HIV dynamics. All migration does not lead to HIV risk and all migrants are not equally at risk for HIV. Migration from regions with low HIV prevalence to regions with higher HIV prevalence, presence of high risk behaviour among migrants, nature of sexual networks at the origin and destination places, circularity rates between the origin and destination places and overall sexual structures at the origin and destination places determine the role of migration in the spread of HIV epidemic.

Clearly, there is a strong need for more scientific evidence as well as a proper theoretical articulation of this relationship. This study is an attempt to move in that direction.

This study explored HIV risk among Rajasthani migrants at destination places in Mumbai and Ahmedabad. A general description of migrants in Mumbai and Ahmedabad was similar to a typical migrant in India. However, within migrants, there were differences in terms of sociodemographic characteristics, living conditions and working conditions. Migration is not a homogenous category. Migration means different things to migrants, even within the same city. In this study, though all migrants came from the same region in Rajasthan, the sociodemographic makeup was different for migrants at the two study sites and within each site. These differences determined their lived experiences at destination place which were reflected in differential HIV risk. For an effective and focused HIV prevention program for migrants, it is imperative to understand migrants' lived experiences. This study has contributed to our understanding of the relationship between migration and HIV. Owing to an increase in HIV prevalence in the hitherto low prevalence regions and high level of internal migration in India, there is clearly a need for more research. More research and mathematical modeling can elucidate the interplay between migration and HIV in different regions in India.

This is the first study of its kind at the global level and in India where social capital approach has been employed to understand differential HIV risk among migrants. The study used mixed methods for an enriched understanding of social capital. This study,

for the first time in epidemiological research, was able to explore the mediating effect of social capital on HIV risk at bonding, bridging and linking domain level. Most of the domains and components of social capital are significantly associated with migrants' HIV risk. Hence, social capital should be made an integral part of the HIV prevention programs for migrants. The quantity and quality of social capital should be measured at the baseline to understand the relationship of domains and components with HIV risk to plan relevant thematic or generalized social capital interventions. As mentioned in the limitations of this study, the study could not test for the community effect. It will be interesting to replicate this study in large number of communities to test for the community effect.

The study shows that there is higher HIV risk in migrants in cities as compared to villages. Hence, the policy emphasis and efforts of National AIDS Control Organization (NACO) in India to counter HIV/AIDS in migrants are justified. NACO aims to cover eight million migrants in National AIDS Control Plan-III. The literature review in this study shows that there are approximately 200 million migrants in India, 40 percent of which are long-distance inter-state migrants. The study findings also show that not all migrants are at equal risk for HIV. So, more research is required to ascertain the HIV risk level among migrants in different regions of India so as to formulate evidence based HIV risk prevention and vulnerability reduction programs and strategies to cover the maximum number of higher risk migrants in India, especially in northern regions of India.

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Appendices

Appendix 1: Factor Analysis: Bonding Social Capital

All Items	STEP I	Final Step
	Variamx Pattern	**Promax Pattern**
Membership: 1. Are you a member of any groups, organizations or associations 2. Membership and level of participation in a group within community **Generalized Trust:** 1. Most people in this community can be trusted 2. In this community, one has to be alert or someone is likely to take advantage of you 3. Most people in this community are willing to help if you need it 4. In this community, people generally do not trust each other in matters of lending and borrowing money 5. People are only interested in their own welfare in this community **Personalized Trust:** 1. Trust people from your own Rajasthani community 2. Trust contractors/ employers / supervisors 3. Trust shopkeepers 4. In the city I only interact with people from my community 5. People you live with, in your place of living are your close friends 6. Your neighbors / members of your own Rajasthani community are your close friends **Help and Reciprocity:** 1. If you suddenly had to go away for a day or two, could you count on your neighbors or people you share house with to take care of your belongings 2. Approach members of your own Rajasthani community for help if you were in need of some kind of support 3. Approach employers /contractors for help if you were in need of some kind of support **Communitarian Sense & Participation:** 1. Level of Trust in community over period of time	**Factor 1: Differences in Community Members** 1. Differences in education level 2. Differences in wealth/material possessions 3. Differences in social status 4. Differences in newer and older generation migrants 5. Differences in political party affiliations 6. Differences in religious beliefs 7. Differences in caste background	**Factor 1: Differences in Community Members** 1. Differences in education level 2. Differences in wealth/material possessions 3. Differences in social status 4. Differences between older and new generation migrants 5. Differences in political party affiliations 6. Differences in caste background
	Factor 2: Trust 1. Most people in this community can be trusted 2. Most people in this community are willing to help if you need it 3. Trust people from own community 4. Approach community members for help 5. Level of trust in community members	**Factor 2: Personalized Trust** 1. Trust in employers / contactors 2. Trust shopkeepers 3. Approach employers / contactors for help
	Factor 3: Personalized Trust 1. Trust in employers / contactors 2. Trust shopkeepers 3. Approach employers / contactors for help	**Factor 3: Trust** 1. Most people in this community can be trusted 2. Most people in this community are willing to help if you need it 3. Trust people from own community 4. Approach community members for help ***5.*** Level of trust over period of time
	Factor 4:Communitarian sense 1. Can count on friends/community members to take care of belongings if I have to go somewhere 2. Contribute to a community project	**Factor 4:Communitarian sense** 1. Can count on friends/community members to take care of belongings if I have to go somewhere 2. Contribute to a community project

2. Contribute to a community project 3. Contribute to solve a community problem (e.g. flood) **Differences in Community:** 1. Differences in education level 2. Differences in wealth/material possessions 3. Differences in social status 4. Differences between younger and older 5. Differences between old migrants and new migrants 6. Differences in political party affiliations 7. Differences in religious beliefs 8. Differences in caste background between people	3. Contribute to solve a community problem **Factor 6: -ve Trust** 1. One has to be careful in community otherwise someone will take advantage 2. In community people don't trust in lending and borrowing 3. In community people only interested in their own welfare **Factor 9:** 1. Trust people from your own community 2. Level of trust in community over period 3. Differences in religious beliefs 4. Differences in caste	3. Contribute to solve a community problem **Factor 5: -ve Trust** 1. One has to be careful in community otherwise someone will take advantage 2. In community people don't trust in lending and borrowing 3. In community people only interested in their own welfare
Total Items = 27	**Total Items** = 21	**Total Items** = 20

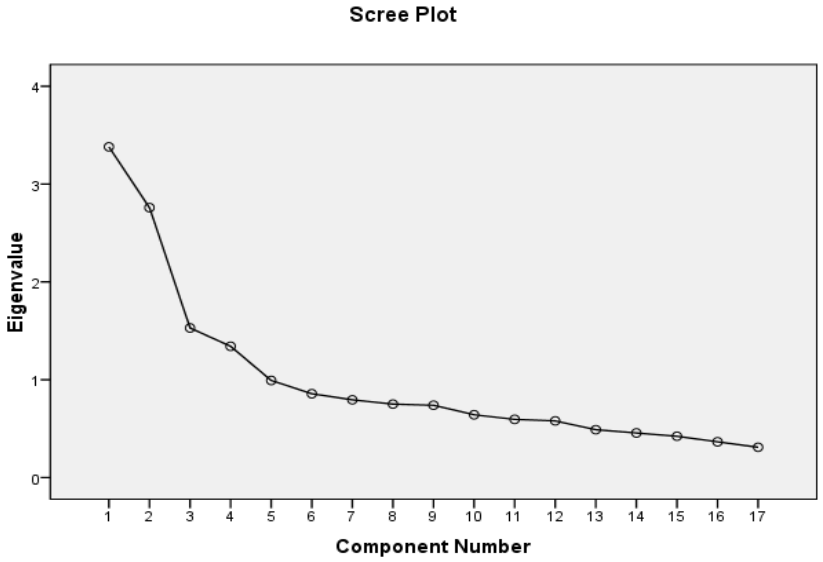
Appendix 2: Bonding Social Capital: Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.381	19.889	19.889	3.381	19.889	19.889	3.142
2	2.759	16.232	36.121	2.759	16.232	36.121	2.310
3	1.529	8.996	45.117	1.529	8.996	45.117	2.211
4	1.342	7.892	53.008	1.342	7.892	53.008	2.105
5	.993	5.839	58.847				
6	.857	5.039	63.887				
7	.794	4.671	68.557				
8	.750	4.413	72.970				
9	.739	4.346	77.316				
10	.642	3.774	81.090				
11	.594	3.497	84.587				
12	.579	3.406	87.993				
13	.489	2.877	90.870				
14	.455	2.679	93.549				
15	.422	2.482	96.031				
16	.365	2.147	98.178				
17	.310	1.822	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Appendix 3: Bonding Social Capital



Appendix 4: Bonding Social Capital: Rotated Component Pattern Matrix[a]

	Component			
	1	2	3	4
Most people in this community can be trusted	-.023	-.027	.027	.803
Most people in this community are willing to help if you need it	.109	-.074	.046	.745
How much you trust to people from your own Rajasthani community	-.237	.338	-.137	.562
How much you trust contractors/ employers / supervisors	.031	.843	.020	.042
How much you trust shopkeepers	.090	.835	-.188	.052
If you suddenly had to go away for a day or two, could you count on your neighbors or people you share house with to take care of your belongings	-.006	.157	.641	-.076
Do you approach members of your own Rajasthani community for help if you were in need of some kind of support	.003	.153	.259	.422
Do you approach employers/contractors for help if you were in need of some kind of support.	-.005	.595	.341	-.078
Since the time you have been here, do you think the level of trust in your community / neighborhood has gotten better, worse, or stayed the same	.211	-.143	.432	.276
If a community project does not directly benefit you, but has benefit for many others in the community, would you contribute to the project	.072	.032	.699	.009
Suppose there is a flood in the community, how likely is that you will contribute to solve the problem	-.175	-.179	.691	.085
Are there differences in education level among people in your community / neighborhood	.711	.114	.037	-.080
Are there differences in wealth/material possessions between people in your community/ neighborhood	.791	.066	-.030	.009
Are there differences in social status between people in your community / neighborhood	.723	.015	.131	-.066
Are there differences between younger and older generations between people in your community / neighborhood	.677	-.091	-.255	.156
Are three differences in political party affiliations between people in your community / neighborhood	.685	-.128	-.012	.082
Are there differences in caste background between people in your community / neighborhood	.613	.160	.042	-.088

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Appendix 5: Bonding Social Capital: Component Correlation Matrix

Component	1	2	3	4
1	1.000	.048	.068	.055
2	.048	1.000	.256	.180
3	.068	.256	1.000	.220
4	.055	.180	.220	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Appendix 6: Bonding Social Capital_Reliability Statistics

	Cronbach's Alpha	**No. of Items**
BO _Overall	.736	17
BO_Differences	.799	6
BO_Personalized Trust	.730	3
BO_Communatarian Sense	.555	4
BO_Generalized Trust	.630	4

Appendix 7: Bonding Social Capital: Goodness of Fit Statistics

1. **Determinants:** .018
2. **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.753
Bartlett's Test of Sphericity	Approx. Chi-Square	6412.121
	df	136
	Sig.	.000

3. **Communalities**

	Extraction
Are there differences in education level among people in your community / neighborhood	.539
Are there differences in wealth/material possessions between people in your community/ neighborhood	.633
Are there differences in social status between people in your community / neighborhood	.556
Are there differences between younger and older generations between people in your community / neighborhood	.520
Are three differences in political party affiliations between people in your community / neighborhood	.470
Are there differences in caste background between people in your community / neighborhood	.417
How much you trust contractors/ employers / supervisors	.776
How much you trust shopkeepers	.707
Do you approach employers/contractors for help if you were in need of some kind of support.	.531
If you suddenly had to go away for a day or two, could you count on your neighbors or people you share house with to take care of your belongings	.402
If a community project does not directly benefit you, but has benefit for many others in the community, would you contribute to the project	.537
Suppose there is a flood in the community, how likely is that you will contribute to solve the problem	.455
Since the time you have been here, do you think the level of trust in your community / neighborhood has gotten better, worse, or stayed the same	.454
Most people in this community can be trusted	.633
Most people in this community are willing to help if you need it	.533
How much you trust to people from your own Rajasthani community	.488
Do you approach members of your own Rajasthani community for help if you were in need of some kind of support	.418

Appendix 8: Factor Analysis: Bridging Social Capital

All Items	STEP I	Final STEP
	Promax Pattern	**Promax Pattern**
Membership: 1. Member of any groups, organizations or associations 2. Membership and level of participation in a group in neighborhood **Generalized Trust:** 1. Most people in this neighborhood can be trusted 2. In this neighborhood, one has to be alert or someone is likely to take advantage of you 3. Most people in this neighborhood are willing to help if you need it 4. In this neighborhood, people generally do not trust each other in matters of lending and borrowing money 5. People are only interested in their own welfare 6. Generally speaking, if you lose your valuables in the neighborhood, someone will see it and return it to you. **Generalized Trust:** 1. Most people in the city can be trusted. 2. In this city, one has to be alert or someone is likely to take advantage of you. 3. Most people in this city are willing to help if you need it 4. In this city, people generally do not trust each other in matters of lending and borrowing money. 5. People are only interested in their own welfare 6. Generally speaking, if you forget your valuables behind, someone will see it and return it to you. **Personalized Trust:** 1. Trust migrants from other areas 2. Trust local people from the city **Friends & Help:** 1. I have friends in other migrant and host communities 2. People from the host community in your neighborhood (i.e. Kherwari)	**Factor 1: Participation** 1. Participated in an association 2. Contacted newspaper, TV, radio about a community problem 3. Participated in an information campaign for migrants' welfare 4. Personally taken part in a sit-in or dharna 5. Volunteered for a charitable/community organization	**Factor 1: Personalized Trust & Help** 1. Most people in city can be trusted 2. Most in city willing to help 3. Trust local people from the city 4. Trust in migrants from other states 5. Approach local people from Kherwari when in need or for some kind of support **6.** Approach migrants from other states when in need **7.** I have friends in other migrant communities
	Factor 2: Generalized Trust 1. Most in neighborhood can be trusted 2. Most in neighborhood willing to help if you need it 3. In this neighborhood, people generally do not trust each other in matters of lending and borrowing money 4. In neighborhood, people are only interested in their own welfare 5. Generally speaking, if you lose your valuables in the neighborhood, someone will see it and return it to you.	**Factor 2: Participation** 1. Participated in an association 2. Participated in an information campaign for migrants' welfare 3. Personally taken part in a sit-in or dharna 4. Volunteered for a charitable/community organization
	Factor 3: Generalized Trust in City (Negative) 1. In neighborhood, one has to be alert otherwise someone will take advantage of you 2. In city, one has to be alert or someone will take advantage 3. In city, people don't trust in lending and borrowing 4. In city, people are interested only in their welfare	**Factor 3: Generalized Trust in Neighborhood** 1. Most in neighborhood can be trusted 2. Most in neighborhood willing to help if you need it 3. In this neighborhood, people generally do not trust each other in matters of lending and borrowing money 4. In neighborhood, people are only interested in their own welfare
	Factor 4: Personalized Trust	

are your close friends 3. Approach to members the Kherwari area who are not Rajasthani, for help if you were in need of some kind of support 4. Approach members of the migrant community from other states, for help if you were in need of some kind of support **Participation:** 1. Participated in an association 2. Contacted newspapers, radio and TV to cover some problem in your community 3. Participated in an information campaign for migrants' welfare 4. Taken part in a sit-in or dharna 5. Made a donation of money or in-kind 6. Volunteered for a charitable/community organization	**& Help** 1. Trust in migrants from other states 2. Friend in other migrant communities 3. Approach local people from Kherwari when in need or for some kind of support 4. Approach migrants from other states when in need or for some support **Factor 5: Generalized Trust in City People (Positive)** 1. Most people in city can be trusted 2. Most in city willing to help 3. Trust local people from the city **Factor 7:** 1. Generally speaking, people will return lost and found things in city 2. People from neighborhood are my friends 3. Made a donation or help in kind in last year	
Total Item = 26	**Total Item =24**	**Total Item =15**

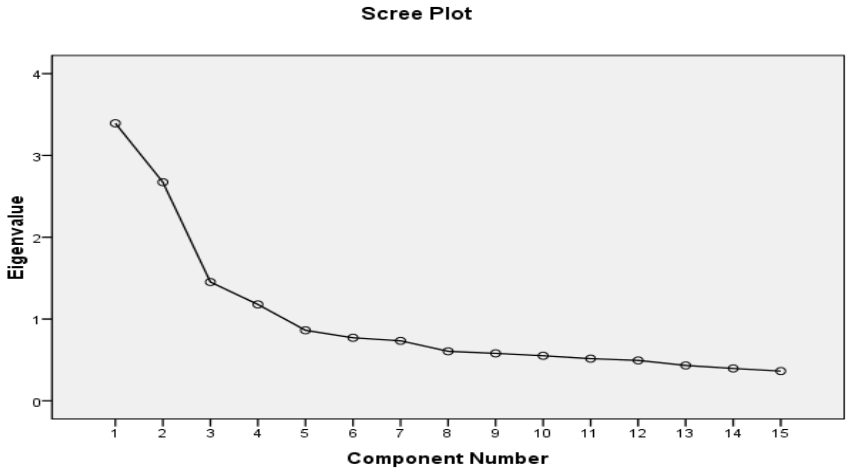
Appendix 9: Bridging Social Capital: Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.393	22.620	22.620	3.393	22.620	22.620	2.988
2	2.673	17.821	40.441	2.673	17.821	40.441	2.720
3	1.452	9.678	50.119	1.452	9.678	50.119	2.500
4	1.178	7.855	57.974				
5	.862	5.746	63.720				
6	.771	5.140	68.860				
7	.733	4.887	73.747				
8	.606	4.038	77.785				
9	.580	3.869	81.654				
10	.551	3.674	85.327				
11	.515	3.437	88.764				
12	.494	3.292	92.056				
13	.432	2.883	94.939				
14	.396	2.639	97.578				
15	.363	2.422	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Appendix 10: Bridging Social Capital



Appendix 11: Bridging Social Capital

Pattern Matrix[a]

	1	2	3
Most people in this neighborhood can be trusted	.140	-.027	.711
Most people in this neighborhood are willing to help if you need it	.081	.007	.755
In this neighborhood, people generally do not trust each other in matters of lending and borrowing money	-.270	.156	.723
People are only interested in their own welfare	-.009	.064	.700
Most people in the city can be trusted.	.561	-.158	.230
Most people in this city are willing to help if you need it	.464	-.205	.290
How much you trust to people from other ethnic or linguistic groups such as other migrants from other areas	.586	.231	-.098
How much you trust ocal people from the city	.683	.057	-.035
I have friends in other migrant and host communities with whom I communicate on a regular basis	.464	-.127	.067
Do you approach to members the Kherwari area who are not Rajasthani, for help if you were in need of some kind of support	.671	.130	-.017
Do you approach members of the migrant community from other states, for help if you were in need of some kind of support	.731	.077	-.194
In the last two years have you personally actively participated in an association	-.054	.828	.113
In the last two years have you personally actively participated in an information campaign for migrants' welfare	.062	.743	-.013
In the last two years have you personally taken part in a sit-in or dharna	-.056	.741	.007
In the last two years have you personally volunteered for a charitable/community organization	.136	.758	.061

Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Appendix 12: Bridging Social Capital: Component Correlation Matrix

Component	1	2	3
1	1.000	.205	.258
2	.205	1.000	-.166
3	.258	-.166	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Appendix 13: Bridging Social Capital_Reliability Statistics

	Cronbach's Alpha	**No. of Items**
BR _Overall	.741	15
BR_Generalized Trust & Help	.719	7
BR_Particiaption	.785	4
BR_Trust Neighborhood	.701	4

Appendix 14: Bridging Social Capital: Goodness of Fit Statistics

1. **Determinants:** .023
2. **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.787
Bartlett's Test of Sphericity	Approx. Chi-Square	5990.357
	df	105
	Sig.	.000

3. **Communalities**

	Extraction
Most people in the city can be trusted.	.499
Most people in this city are willing to help if you need it	.656
How much you trust ocal people from the city	.510
How much you trust to people from other ethnic or linguistic groups such as other migrants from other areas	.498
Do you approach to members the Kherwari area who are not Rajasthani, for help if you were in need of some kind of support	.656
Do you approach members of the migrant community from other states, for help if you were in need of some kind of support	.744
I have friends in other migrant and host communities with whom I communicate on a regular basis	.343
In the last two years have you personally actively participated in an association	.665
In the last two years have you personally actively participated in an information campaign for migrants' welfare	.609
In the last two years have you personally taken part in a sit-in or dharna	.562
In the last two years have you personally volunteered for a charitable/community organization	.628
Most people in this neighborhood can be trusted	.583
Most people in this neighborhood are willing to help if you need it	.624
In this neighborhood, people generally do not trust each other in matters of lending and borrowing money	.537
People are only interested in their own welfare	.584

Appendix 15: Factor Analysis: Linking Social Capital

All Components	**STEP I**	**Final STEP**
	Parimox Pattern	**Parimox Pattern**
Membership: 1. Member of any groups, organizations or associations 2. Membership and level of participation in a group outside community **Personalized Trust in Services:** 1. Trust local government officials such as municipality officials 2. Trust police 3. Trust govt. health departments or govt. hospital 4. Trust doctors 5. Trust NGOs 6. Banks lend money to business people in our community (e.g., contractors, shopkeepers etc.) 7. Hospital/nursing station/health centre authorities listen to people in our community **Friends and help:** 1. People from government departments, NGOs, municipality or political parties are your close friends 2. Approach government authorities, municipality and government departments and services etc. for help if you were in need of some kind of support **Access to Govt. Services:** 1. Health services/clinics 2. Water and sanitation services 3. Job training/employment 4. Credit/finance 5. Justice/conflict resolution 6. STI/HIV Services (Information counseling and	**Factor 1: Trust in services and approach for help** 1. local govt. officials 2. Trust police 3. Trust doctors 4. Trust NGOs 5. Approach govt. authorities for help	**Factor 1: Trust in services and approach for help** 1. local govt. officials 2. Trust police 3. Trust govt. health depts. / hospitals 4. Trust doctors 5. Trust NGOs 6. Approach govt. authorities for help
	Factor 2: Participation 1. Voted in election 2. Made contact with an influential person 3. Participated in election campaign 4. Contacted your elected representative	**Factor 2: Participation** 1. Voted in election 2. Made contact with an influential person 3. Participated in election campaign 4. Contacted your elected representative
	Factor 3: Access to Govt. Services: 1. Do you have access to the services of job training/employment 2. Do you have access to the services of credit/finance 3. Do you have access to the services of Justice/conflict resolution 4. How do you rate your experience with government services in your community	**Factor 3: Access to Govt. Services:** 1. Do you have access to the services of job training/employment 2. Do you have access to the services of credit/finance 3. Do you have access to the services of Justice/conflict resolution 4. Access to STI/HIV services 5. How do you rate your experience with government services in your community
	Factor 4: Personalized Trust in Services 1. Trust govt. health departments or govt. hospital 2. Trust doctors 3. Banks lend money to business people in our community (e.g., contractors, shopkeepers etc.) 4. Hospital/nursing station/health centre authorities listen to people	**Factor 4: Personalized Trust in Services** 1. Banks lend money to business people in our community (e.g., contractors, shopkeepers etc.) 2. Hospital/nursing station/health centre authorities listen to people in our community

treatment) 7. How do you rate your experience with government services in your community **Participation:** 1. Voted in the elections 2. Made a personal contact with an influential person 3. Participated in an election campaign 4. Contacted your elected representative	in our community **Factor 6: Membership** 1. Member of a group/org. 2. Level of participation in the group/org. 3. People from the govt., NGOs, political parties are my friends	
Total Items =22	**Total Items =20**	**Total Items = 17**

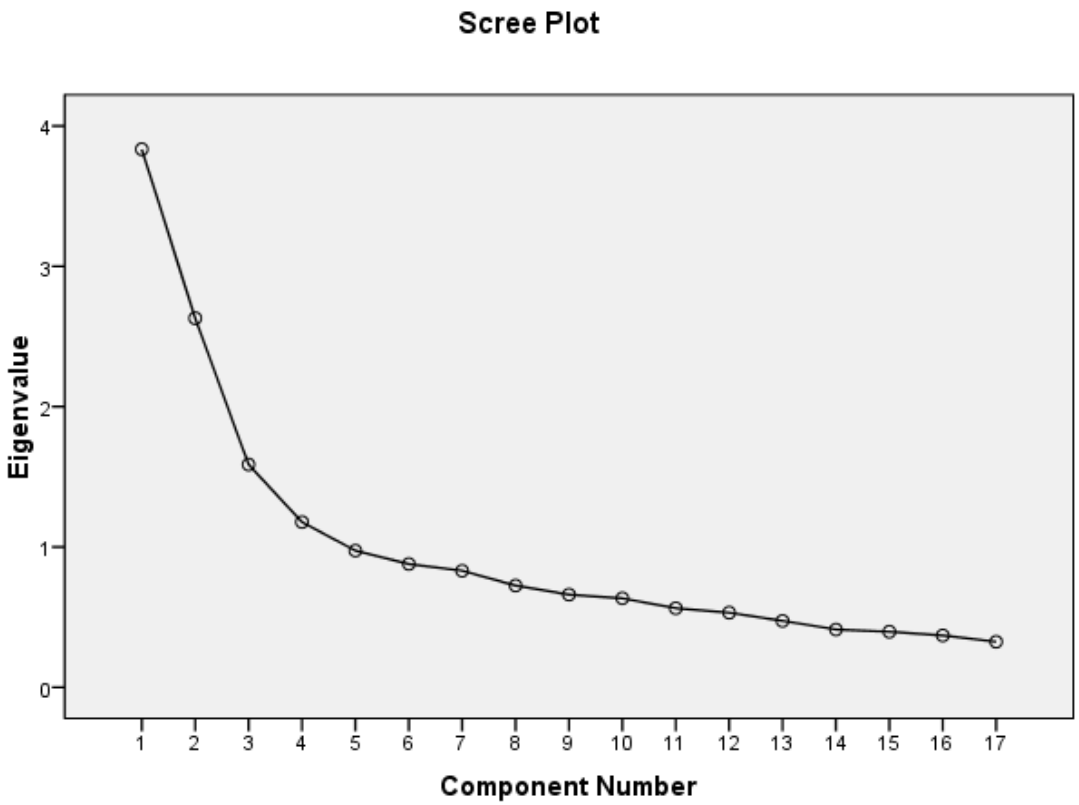
Appendix 16: Linking Social Capital

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.834	22.554	22.554	3.834	22.554	22.554	2.822	16.599	16.599
2	2.630	15.471	38.025	2.630	15.471	38.025	2.328	13.692	30.291
3	1.587	9.336	47.361	1.587	9.336	47.361	2.191	12.889	43.179
4	1.178	6.927	54.288	1.178	6.927	54.288	1.888	11.108	54.288
5	.974	5.727	60.015						
6	.879	5.168	65.183						
7	.830	4.884	70.067						
8	.725	4.262	74.330						
9	.660	3.884	78.214						
10	.634	3.729	81.943						
11	.564	3.315	85.258						
12	.532	3.128	88.386						
13	.473	2.783	91.169						
14	.412	2.421	93.590						
15	.396	2.329	95.918						
16	.369	2.173	98.092						
17	.324	1.908	100.000						

Extraction Method: Principal Component Analysis.

Appendix 17: Linking Social Capital



Appendix 18: Linking Social Capital: Correlation Matrix

Component Correlation Matrix

Component	1	2	3	4
1	1.000	.053	.240	.376
2	.053	1.000	.238	-.087
3	.240	.238	1.000	.153
4	.376	-.087	.153	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

Appendix 19: Linking Social Capital

Pattern Matrix[a]

	Component			
	1	2	3	4
How much you trust local government officials such as municipality officials	.677	-.067	-.041	.218
How much you trust police	.790	.040	.082	-.357
How much you trust government health departments or government hospital	.479	-.087	.111	.372
How much you trust doctors	.563	.038	.022	.330
How much you trust NGOs	.775	-.039	-.036	-.037
Banks lend money to business people in our community (e.g., contractors, shopkeepers etc.)	-.026	.023	-.009	.724
Hospital/nursing station/health centre authorities listen to people in our community	.116	.037	-.032	.800
Do you approach government authorities, municipality and government departments and services etc. for help if you were in need of some kind of support	.538	.003	-.145	.109
Do you have access to the services of Job training/employment	-.154	.002	.519	.354
Do you have access to the services of credit/finance	-.231	-.057	.828	-.002
Do you have access to the services of Justice/conflict resolution	.034	-.066	.799	-.111
Do you have access to the services of STI/HIV Services (Information counseling and treatment)	.271	.112	.508	-.180
How do you rate your experience with government services in your community	.134	.104	.526	.158
In the last two years have you personally voted in the elections	-.025	.703	-.024	.135
In the last two years have you personally made a personal contact with an influential person	-.053	.668	.049	-.050
In the last two years have you personally actively participated in an election campaign	.062	.787	-.040	-.158
In the last two years have you personally contacted your elected representative	-.058	.851	-4.215E-5	.131

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Appendix 20: Linking Social Capital_Reliability Statistics

	Cronbach's Alpha	**No. of Items**
Li _Overall	.775	17
BO_Trust in Services	.782	6
BO_Particiaption	.715	4
BO_Links with Services	.672	5
BO_Trust Reciprocity by Services	.617	2

Appendix 21: Linking Social Capital: Goodness of Fit Statistics

1. **Determinants:** .011
2. **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.789
Bartlett's Test of Sphericity	Approx. Chi-Square	7138.417
	df	136
	Sig.	.000

Appendix 22: Risk Variables: Difference in Two Study Sites

	Research Site	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)
Casual partners in last 12 months	Mumbai	803	.16	.366	.013	.000
	Ahmedabad	794	.32	.465	.017	
Had sex with a CSW here in the city in last 12 months	Mumbai	803	.10	.300	.011	.000
	Ahmedabad	794	.17	.379	.013	
Condom use with sex worker in city	Mumbai	803	.03	.180	.006	.000
	Ahmedabad	794	.12	.326	.012	

Appendix 23: Partners or not

		Frequency	Percent
Valid	No	1219	76.3
	One or more casual partner/s	379	23.7
	Total	1598	100.0

Appendix 24: City wise Distribution

		Mumbai		Ahmedabad				
		Number	Percent	Number	Percent	Pearson Chi-Square	Asymp. Sig. (2-sided)	Risk estimate (Mumbai/Ahmedabad)
Valid	No	676	81.4	543	68.4	54.369	.000	2.441
	One or more casual partner/s	128	15.9	251	31.6			
	Total	804	100.0	794	100.0			

Appendix 25: Sex with sex worker or not

Casual sex partner/s in the city in last 12 months		Frequency	Percent
Valid	No	1380	86.4
	Yes	218	13.6
	Total	1598	100.0

Appendix 26: City wise Distribution

		Mumbai		Ahmedabad				
Had sex with a sex worker at destination place in last 12 months		Number	Percent	Number	Percent	Pearson Chi-Square	Asymp. Sig. (2-sided)	Risk estimate (Ahmedabad/Mumbai)
Valid	No	724	90.0	656	82.6	18.720	.000	1.903
	Yes	80	10.0	138	17.4			
	Total	804	100.0	794	100.0			

Appendix 27: Always condom use or not

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always condom use or no sex with sex worker	1475	92.3	92.3	92.3
	Most of the times/sometimes/never	123	7.7	7.7	100.0
	Total	1598	100.0	100.0	

Appendix 28: City wise Distribution

		Mumbai		Ahmedabad				
Condom use with sex worker		Number	Percent	Number	Percent	Pearson Chi-Square	Asymp. Sig. (2-sided)	Risk estimate (Ahmedabad/Mumbai)
Valid	Always condom use or no sex with sex worker	777	96.6	698	87.9	42.878	.000	3.95
	Most of the times/sometimes/never	27	3.4	96	12.1			
	Total	804	100.0	794	100.0			

Appendix 29: Sex with CSW

	Mumbai N=804 (%)		Ahmedabad N=794 (%)		Overall N=1598 (%)	
	City	**Village**	**City**	**Village**	**City**	**Village**
Sex with CSW						
Yes	80 (10.0)	18 (2.2)	138 (17.4)	25 (3.1)	218 (13.6)	43 (2.7)
No	724 (90.0)	786 (97.2)	656 (82.6)	769 (96.9)	1380 (86.4)	1555 (97.3)
Frequency					**(n=218)**	**(n=43)**
Once/twice a year	60 (7.5)	8 (1.0)	60 (7.6)	20 (2.5)	120 (55.0)	28 (65.1)
Once a month	18 (2.2)	8 (1.0)	65 (8.2)	2 (.3)	83 (38.1)	10 (23.2)
Once a week	2 (.2)	2 (.2)	13 (1.2)	3 (.4)	15 (6.9)	5 (11.6)
N.A	724 (90.0)	786 (97.8)	656 (82.6)	769 (96.9)	1380 (86.4)	1555 (97.3)

Appendix 30: Testing for Difference in Risk between cities and villages & between Individuals: Overall sample

			Have you ever had sex with a commercial sex worker in your home village		
			No	Yes	Total
Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	No	Count	1356	24	1380
		% within Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	98.3%	1.7%	100.0%
		% within Have you ever had sex with a commercial sex worker in your home village	87.2%	55.8%	86.4%
	Yes	Count	199	19	218
		% within Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	91.3%	8.7%	100.0%
		% within Have you ever had sex with a commercial sex worker in your home village	12.8%	44.2%	13.6%
	Total	Count	1555	43	1598
		% within Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	97.3%	2.7%	100.0%
		% within Have you ever had sex with a commercial sex worker in your home village	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	34.993[a]	1	.000		
Continuity Correction[b]	32.380	1	.000		
Likelihood Ratio	24.667	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	34.971	1	.000		
McNemar Test				.000[c]	
N of Valid Cases	1598				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.87.

b. Computed only for a 2x2 table

c. Binomial distribution used.

Appendix 31: Testing for Difference in Risk between city and villages & between Individuals in Mumbai and Ahmedabad

Research Site				Have you ever had sex with a commercial sex worker in your home village		
				No	Yes	Total
Mumbai	Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	No	Count	712	11	723
			% within Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	98.5%	1.5%	100.0%
			% within Have you ever had sex with a commercial sex worker in your home village	90.7%	61.1%	90.0%
		Yes	Count	73	7	80
			% within Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	91.2%	8.8%	100.0%
			% within Have you ever had sex with a commercial sex worker in your home village	9.3%	38.9%	10.0%
Ahmedabad	Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	No	Count	643	13	656
			% within Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	98.0%	2.0%	100.0%
			% within Have you ever had sex with a commercial sex worker in your home village	83.6%	52.0%	82.6%
		Yes	Count	126	12	138
			% within Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months	91.3%	8.7%	100.0%
			% within Have you ever had sex with a commercial sex worker in your home village	16.4%	48.0%	17.4%

Chi-Square Tests

Research Site		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Mumbai	**Pearson Chi-Square**	17.175[a]	1	.000		
	McNemar Test				.000[c]	
Ahmedabad	**Pearson Chi-Square**	16.854[d]	1	.000		
	McNemar Test				.000[c]	

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 1.79.

b. Computed only for a 2x2 table

c. Binomial distribution used.

d. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.35.

Table 32: Reasons for looking for sex in city & Sex with sex worker in city

Potentiel Reasons	Mumbai			Ahmedabad		
	N (804)	N (%)	O.R. (C.I.)	N (794)	N (%)	O.R. (C.I.)
Being away from wife						
Yes	431	67 (15.5)	5.097 (2.765-9.396)	618	104 (16.8)	.845 (NS)
No	373	13 (3.5)		176	34 (19.3)	
City ensuring anonymity						
Yes	268	38 (14.2)	1.943 (1.220-3.096)	392	76 (19.4)	1.319 (.912-1.907)
No	536	42 (7.8(		402	62 (15.4)	
Alcohol assumption						
Yes	142	22 (15.5)	1.909 (1.126-3.238)	346	56 (16.2)	.862 (NS)
No	662	58 (8.8)		448	82 (18.3)	
Lack of social engagement						
Yes	138	20 (14.5)	1.712 (.994-2.947)	182	41 (22.5)	1.544 (1.025-2.326)
No	666	60 (9.0)		612	97 (15.8)	
Loneliness						
Yes	259	45 (17.4)	3.064 (1.916-4.901)	542	107 (19.7)	1.754 (1.139-2.699)
No	545	35 (6.4)		252	31 (12.3)	
Peer Pressure						
Yes	97	15 (15.5)	1.807 (NS)	337	59 (17.5)	1.015 (NS)
No	707	65 (9.2)		457	79 (17.3)	
Variation in disposable income						
Yes	98	11 (11.2)	1.167 (NS)	271	66 (24.4)	2.017 (1.389-2.927)
No	706	69 (9.8)		523	72 (13.8)	
To forget hardship and stress						
Yes	135	20 (14.8)	1.765 (1.025-3.041)	277	50 (18.1)	1.074 (NS)
No	669	60 (9.0)		517	88 (17.0)	
Easy availability of sex						
	383	49 (12.8)	1.846 (1.150-2.962)	577	132 (22.9)	10.431 (4.529-24.028)
	421	31 (7.4)		217	6 (2.8)	

Appendix 33: Correlation: Sex with sex worker in city & Reasons for looking for sex in city

		Had sex with a commercial sex worker in the destination place in the last 12 months
In your opinion, being away from wife/regular sexual partner is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.094**
	Sig. (2-tailed)	.000
	N	1598
In your opinion, city ensuring anonymity/sense of freedom is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.070**
	Sig. (2-tailed)	.005
In your opinion, alcohol consumption is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.055*
	Sig. (2-tailed)	.028
In your opinion, not having anything else to do in the evening or lack of opportunities and avenues of social engagement and entertainment is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.036
	Sig. (2-tailed)	.148
In your opinion, loneliness is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.150**
	Sig. (2-tailed)	.000
In your opinion, peer pressure is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.099**
	Sig. (2-tailed)	.000
In your opinion, man's nature to have sex regularly is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	-.019
	Sig. (2-tailed)	.444
In your opinion, having many partners is the sign of being virile/manliness being reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	-.052*
	Sig. (2-tailed)	.038
In your opinion, variation in disposable income is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.128**
	Sig. (2-tailed)	.000
In your opinion, to forgetting stress, hardships is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.060*
	Sig. (2-tailed)	.017
In your opinion, easy availability of sex in the city is the reason which play role in looking for or having sex partners at the destination place(here in the city)	Pearson Correlation	.199**
	Sig. (2-tailed)	.000
	N	1598

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 34: Univariate relations of HIV risk & Sociodemographic Characteristics in Mumbai

Measures	N	Casual partners		Sex with CSW		No condom use with CSW	
		n (%)	OR (C.I.)	n (%)	OR (C.I.)	n (%)	OR (C.I.)
Marital Status							
Currently Married						25 (4.6)	6.082 (1.430-25.880)
Unmarried/Never Married						2 (.8)	1.000
Live with wife or alone							
With wife							
Currently without wife but wife comes and stays							
Without wife							
Not applicable							
Duration of migration							
<or = 1 year							
> 1 year and < than 5 years							
5 or > years							
Nature of Job							
Daily wage basis	693	106 (15.3)	1.000	62 (8.9)	1.000	18 (2.6)	1.000
On long contract	34	5 (14.7)	.955 (.361-2.522)	4 (11.8)	1.357 (.463-3.978)	1 (2.9)	1.136 (.147-8.772)
Permanent or regular job	77	23 (29.9)	2.359 (1.388-4.007)	14 (18.4)	2.262 (1.198-4.268)	8 (10.5)	4.348 (1.824-10.366)
No. of work-days in a month							
<10 days	12	0 (.000)	.000 (.000-..)	0 (.0)	.000 (.000-..)	0 (.000)	.000 (.000-..)
10-20 days	331	39 (11.8)	.515 (.344-.770)	18 (5.4)	.370 (.215-.638)	4 (1.2)	.233 (.080-.680)
20-30 days	461	95 (20.6)	1.000	62 (13.5)	1.000	23 (5.0)	
Average earning							
<3000 rupees	227	28 (12.3)	1.000	14 (6.2)	1.000	3 (1.3)	1.000
3000-5000 rupees	401	60 (15.0)	1.251 (.773-2.024)	33 (8.2)	1.364 (.714-2.607)	10 (2.5)	1.910 (.520-7.011)
>5000 rupees	176	46 (26.1)	2.515 (1.496-4.227)	33 (18.9)	3.511 (1.815-6.794)	14 (8.0)	6.453 (1.824-22.822)
Income steady or fluctuating							
Steady	81	25 (31.2)	2.515 (1.505-4.203)	14 (17.5)	2.080 (1.109-3.902)	7 (8.8)	3.325 (1.361-8.125)
Fluctuating	723	109 (15.1)	1.000	66 (9.1)	1.000	20 (2.8)	1.000
Mode of salary							

receipt							
Daily basis/Weekly/Job based	513	70 (13.6)	1.000	36 (7.0)	1.000	11 (2.1)	1.000
Monthly / Lump sum contract based	291	64 (22.0)	1.784 (1.227-2.596)	44 (15.1)	2.360 (1.480-3.763)	16 (5.5)	2.655 (1.215-5.802)

Appendix 35: Univariate relations of HIV risk & Sociodemographic Characteristics in Ahmedabad

Measures	**N**	**Casual partners**		**Sex with CSW**		**No condom use with CSW**	
		n (%)	**OR (C.I.)**	**n (%)**	**OR (C.I.)**	**n (%)**	**OR (C.I.)**
Marital Status							
Currently Married	365	91 (24.9)	1.000	50 (13.7)	1.000		
Unmarried/Never Married	429	160 (37.3)	1.791 (1.317-2.436)	88 (20.5)	1.626 (1.112-2.376)		
Live with wife or alone							
With wife/ wife but wife comes and stays	119	16 (13.4)	1.000	6 (5.0)	1.000	4 (3.4)	1.000
Without wife / Unmarried	675	235 (34.8)	3.438 (1.984-5.959)	132 (19.6)	4.578 (1.971-10.635)	92 (13.6)	4.537 (1.635-12.592)
Duration of migration							
<or = 1 year	215	53 (24.7)	1.000				
> 1 year and < than 5 years	425	156 (36.7)	1.773 (1.227-2.560)				
5 or > years	154	42 (27.3)	1.146 (.716-1.836)				
Nature of Job							
Daily wage basis	208	59 (28.4)	1.000	28 (13.5)	1.000	21 (3.4)	1.000
On long contract	206	52 (25.2)	.853 (.552-1.318)	23 (11.2)	.808 (.448-1.456)	14 (6.8)	.649 (.321-1.315)
Permanent or regular job	380	140 (36.8)	1.473 (1.021-2.125)	87 (22.9)	1.909 (1.200-3.037)	61 (16.1)	1.703 (1.005-2.886)
No. of work-days in a month							
<10 days							
10-20 days							
20-30 days							
Average earning							
<3000 rupees							
3000-5000 rupees							
>5000 rupees							
Income steady or fluctuating							
Steady	385	101 (26.2)	.614 (.453-.832)	49 (12.7)	.524 (.358-.767)	28 (7.3)	.393 (.247-.626)
Fluctuating	409	150 (36.7)		89 (21.8)	1.000	68 (16.6)	
Mode of salary receipt							

Daily basis / Weekly/ Job based	90	45 (50.0)	1.000	29 (32.2)	1.000	24 (26.7)	1.000
Monthly / Lump sum contract based	704	206 (29.3)	.414 (.265-.648)	109 (15.5)	.385 (.237-.627)	72 (10.2)	.313 (.185-.531)

Appendix 36: Multivariate Analysis of HIV Risk & Sociodemographic Characteristics in Mumbai

Measure	Casual partners	Sex with CSW	No Condom use with CSW
	OR (C.I.)	OR (C.I.)	OR (C.I.)
Age			
Education			
Marital status (Unmarried)			.203 (.047-.877)
Living with wife or alone			
Duration of migration			
Accommodation own or rented			
Nature of job			
Workdays in a month	1.590 (1.034-2.444)	1.846 (1.019-3.347)	3.046 (.981-9.463)
Average income	1.343 (1.003-1.797)	1.541 (1.064-2.233)	1.877 (.981-3.589)
Income steady	1.997 (1.175-3.395)		
Monthly or lump sum contract based mode of salary receipt (reference: daily/weekly/job based		1.700 (1.034-2.793)	

Appendix 37: Multivariate Analysis of HIV Risk & Sociodemographic Characteristics in Ahmedabad

Measure	Casual partners	Sex with CSW	No Condom use with CSW
	OR (C.I.)	OR (C.I.)	OR (C.I.)
Age			
Education			
Marital status (Unmarried)	1.707 (1.193-2.444)	1.497 (.979-2.290)	
Living without wife or unmarried	3.583 (1.910-6.723)	5.323 (2.111-13.424)	6.097 (2.125-17.493)
Duration of migration	1.282 (.997-1.648)		
Accommodation own or rented			
Nature of job	1.458 (1.190-1.787)	1.699 (1.313-2.198)	1.739 (1.307-2.315)
Workdays in a month			
Average income		1.453 (1.039-2.032)	
Income steady	.584 (.411-.830)	.450 (.289-.699)	.386 (.230-.648)
Mode of salary payment	.363 (.216-.609)	.355 (.200-.629)	.344 (.189-.627)

Appendix 38: Multivariate Analysis of Casual Partners and Sociodemographic Characteristics- overall sample

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 7[a]	mart3(1)	.309	.127	5.894	1	.015	1.362	1.061	1.749
	Stayinalone(1)	.842	.237	12.664	1	.000	2.321	1.460	3.690
	job8	.510	.082	38.787	1	.000	1.665	1.418	1.955
	wrkdys9	.550	.165	11.176	1	.001	1.734	1.256	2.394
	incflt11(1)	-.442	.154	8.220	1	.004	.643	.475	.870
	Constant	-4.368	.501	76.047	1	.000	.013		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 39: Multivariate Analysis of Casual Partners and Sociodemographic Characteristics- Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 9[a]	wrkdys9	.464	.219	4.466	1	.035	1.590	1.034	2.444
	ernmnt10	.295	.149	3.923	1	.048	1.343	1.003	1.797
	incflt11(1)	.692	.271	6.527	1	.011	1.997	1.175	3.395
	Constant	-3.508	.558	39.547	1	.000	.030		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 40: Multivariate Analysis of Casual Partners and Sociodemographic Characteristics- Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 6[a]	mart3(1)	.535	.183	8.543	1	.003	1.707	1.193	2.444
	Stayinalone(1)	1.276	.321	15.807	1	.000	3.583	1.910	6.723
	drnmgr5b	.248	.128	3.749	1	.053	1.282	.997	1.648
	job8	.377	.104	13.211	1	.000	1.458	1.190	1.787
	incflt11(1)	-.537	.179	8.979	1	.003	.584	.411	.830
	salrecptmode(1)	-1.014	.265	14.673	1	.000	.363	.216	.609
	Constant	-2.391	.489	23.902	1	.000	.092		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 41: Multivariate Analysis of Sex with Sex Worker and Sociodemographic Characteristics- overall sample

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 7[a]	Stayinalone(1)	1.367	.329	17.291	1	.000	3.925	2.060	7.477
	job8	.594	.098	36.753	1	.000	1.812	1.495	2.196
	wrkdys9	.647	.229	7.963	1	.005	1.909	1.218	2.992
	ernmnt10	.323	.119	7.380	1	.007	1.381	1.094	1.742
	incflt11(1)	-.780	.190	16.768	1	.000	.458	.316	.666
	Constant	-6.420	.724	78.593	1	.000	.002		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 42: Multivariate Analysis of Sex with Sex Worker and Sociodemographic Characteristics- Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 9[a]	wrkdys9	.613	.303	4.083	1	.043	1.846	1.019	3.347
	ernmnt10	.432	.189	5.224	1	.022	1.541	1.064	2.233
	salrecptmode(1)	.530	.254	4.377	1	.036	1.700	1.034	2.793
	Constant	-4.968	.784	40.197	1	.000	.007		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 43: Multivariate Analysis of Sex with Sex Worker and Sociodemographic Characteristics- Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 6[a]	mart3(1)	.404	.217	3.471	1	.062	1.497	.979	2.290
	Stayinalone(1)	1.672	.472	12.556	1	.000	5.323	2.111	13.424
	job8	.530	.131	16.263	1	.000	1.699	1.313	2.198
	ernmnt10	.373	.171	4.766	1	.029	1.453	1.039	2.032
	incflt11(1)	-.799	.225	12.633	1	.000	.450	.289	.699
	salrecptmode(1)	-1.036	.292	12.576	1	.000	.355	.200	.629
	Constant	-3.999	.634	39.775	1	.000	.018		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 44: Multivariate Analysis of No or Inconsistent Condom Use and Sociodemographic Characteristics- overall sample

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	Stayinalone(1)	1.043	.383	7.429	1	.006	2.837	1.340	6.004
	job8	.861	.123	48.816	1	.000	2.367	1.859	3.013
	wrkdys9	.779	.325	5.734	1	.017	2.178	1.152	4.120
	incflt11(1)	-.993	.234	18.059	1	.000	.370	.234	.586
	Constant	-7.019	.982	51.081	1	.000	.001		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 45: Multivariate Analysis of No or Inconsistent Condom Use and Sociodemographic Characteristics- Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 9[a]	mart3(1)	-1.595	.746	4.563	1	.033	.203	.047	.877
	wrkdys9	1.114	.578	3.711	1	.054	3.046	.981	9.463
	ernmnt10	.630	.331	3.623	1	.057	1.877	.981	3.589
	Constant	-7.482	1.589	22.181	1	.000	.001		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 46: Multivariate Analysis of No or Inconsistent Condom Use and Sociodemographic Characteristics- Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	Stayinalone(1)	1.808	.538	11.303	1	.001	6.097	2.125	17.493
	job8	.553	.146	14.401	1	.000	1.739	1.307	2.315
	incflt11(1)	-.952	.265	12.951	1	.000	.386	.230	.648
	salrecptmode(1)	-1.066	.306	12.154	1	.000	.344	.189	.627
	Constant	-3.619	.642	31.812	1	.000	.027		

a. Variable(s) entered on step 1: age1, edu2, mart3, Stayinalone, drnmgr5b, job8, wrkdys9, ernmnt10, incflt11, salrecptmode, Livplaceownorrented.

Appendix 47: Bonding Social Capital in two cities

	Research Site	N	Mean	Std. Deviation	Sig. (2-tailed)
Differences among community members	Mumbai	804	.0216958	.99767376	
	Ahemedabad	794	-.0219690	1.00249999	.383
Personalized trust and help	Mumbai	804	-.3078104	1.00163287	..000
	Ahemedabad	794	.3116871	.89700531	
Communitarian sense	Mumbai	804	-.0288631	.96493357	
	Ahemedabad	794	.0292266	1.03408570	.246
generalized trust and help	Mumbai	804	-.1310091	1.12177744	.000
	Ahemedabad	794	.1326591	.83940215	

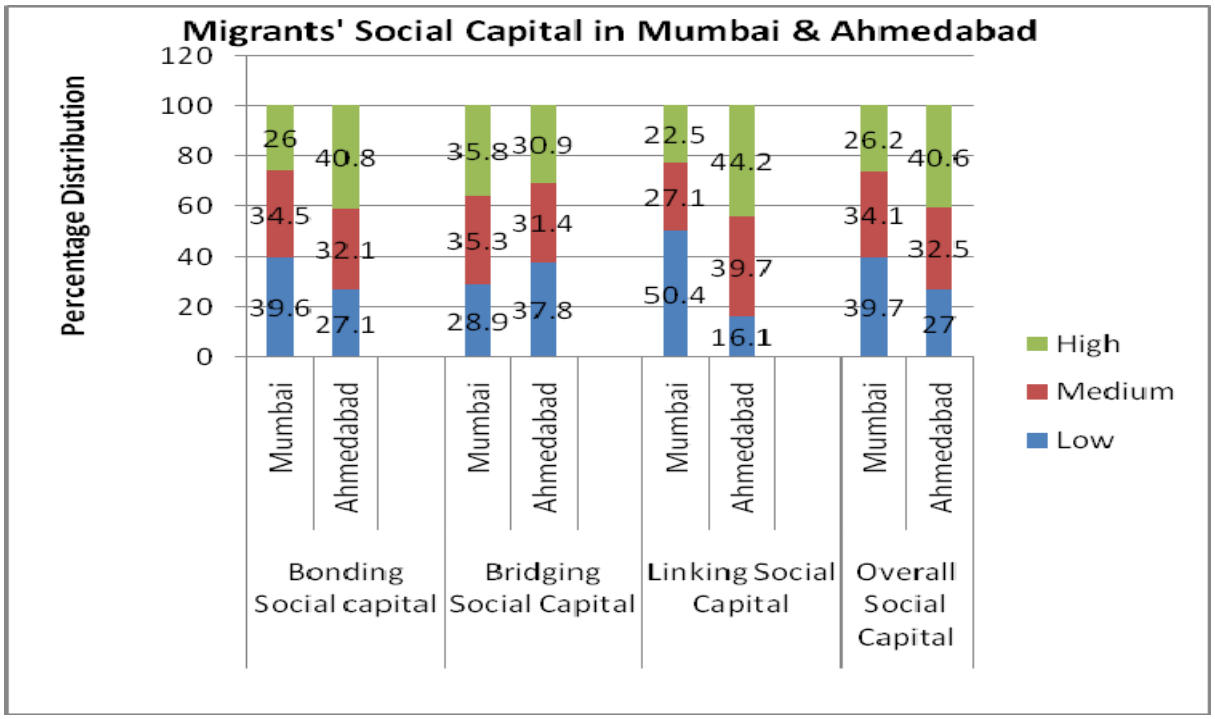
Appendix 48: Bridging Social Capital in two cities

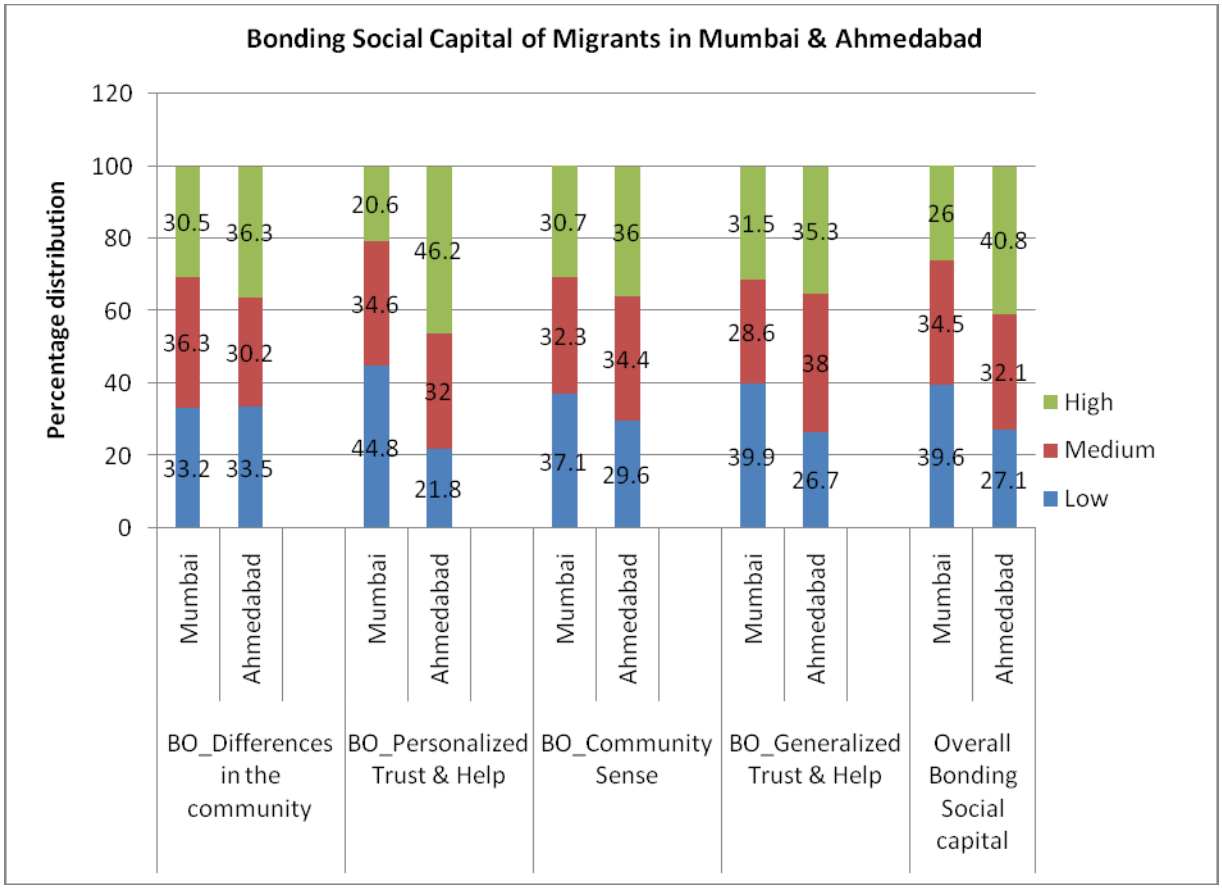
	Research Site	N	Mean	Std. Deviation	Sig. (2-tailed)
Generalized trust in neighborhood and city people and help	Mumbai	804	.0616969	1.00216730	
	Ahemedabad	794	-.0624739	.99453497	.013
Participation in bridging kinds of activities	Mumbai	804	.0913746	1.25391747	.000
	Ahemedabad	794	-.0925255	.63615886	
Trust in neighborhood	Mumbai	804	.0631979	.99609375	
	Ahemedabad	794	-.0639939	1.00050329	.011

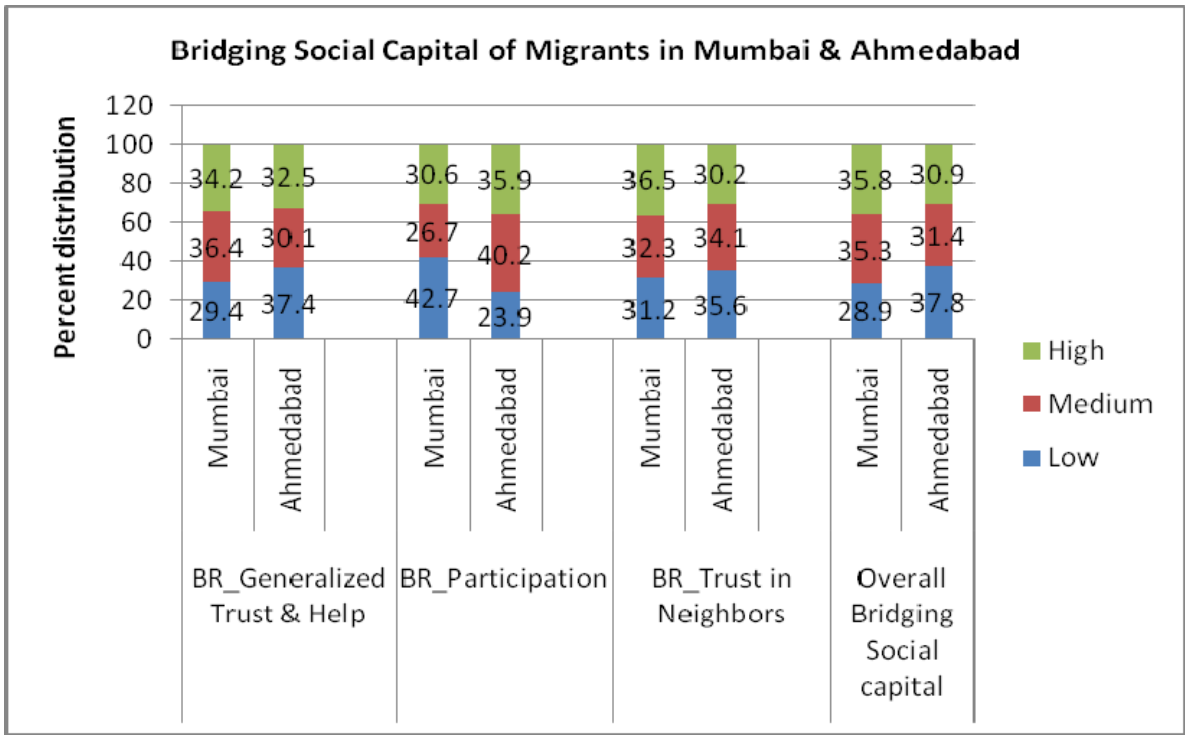
Appendix 49: Linking Social Capital in two cities

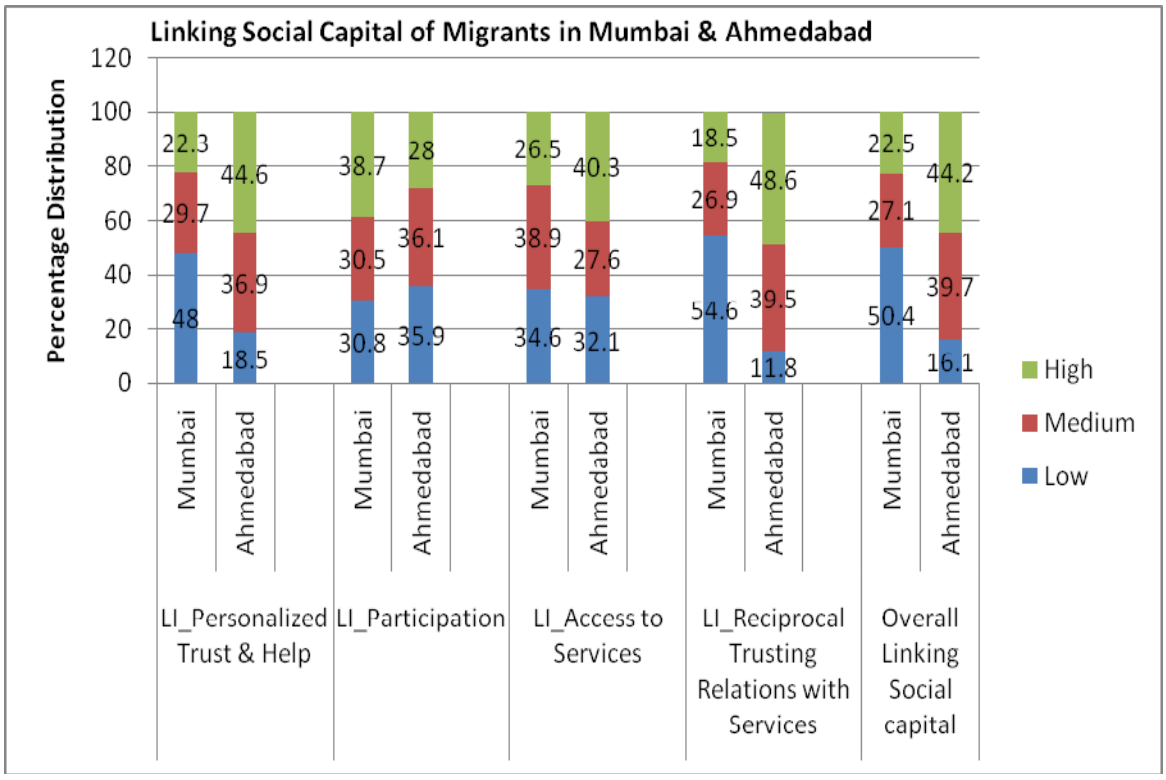
	Research Site	N	Mean	Std. Deviation	Sig. (2-tailed)
Personalized trust in services	Mumbai	804	-.3165073	.91166386	
	Ahemedabad	794	.3204935	.98379237	.000
Participation in activities that link outside	Mumbai	804	.1041010	1.08728740	.000
	Ahemedabad	794	-.1054121	.89143512	
Access to services	Mumbai	804	-.1126045	.95880260	.000
	Ahemedabad	794	.1140227	1.02815514	
Reciprocal trusting relations from the services	Mumbai	804	-.4456239	1.08019601	.000
	Ahemedabad	794	.4512363	.65355004	

Appendix 50: Graph 1-4






Bridging Social Capital of Migrants in Mumbai & Ahmedabad
Percent distribution
120
100
80
60
40
20
0
34.2
36.4
29.4
32.5
30.1
37.4
30.6
26.7
42.7
35.9
40.2
23.9
36.5
32.3
31.2
30.2
34.1
35.6
35.8
35.3
28.9
30.9
31.4
37.8
Mumbai
Ahmedabad
Mumbai
Ahmedabad
Mumbai
Ahmedabad
Mumbai
Ahmedabad
BR_Generalized Trust & Help
BR_Participation
BR_Trust in Neighbors
Overall Bridging Social capital
High
Medium
Low


Linking Social Capital of Migrants in Mumbai & Ahmedabad
Percentage Distribution
120
100
80
60
40
20
0
22.3
29.7
48
44.6
36.9
18.5
38.7
30.5
30.8
28
36.1
35.9
26.5
38.9
34.6
40.3
27.6
32.1
18.5
26.9
54.6
48.6
39.5
11.8
22.5
27.1
50.4
44.2
39.7
16.1
Mumbai
Ahmedabad
Mumbai
Ahmedabad
Mumbai
Ahmedabad
Mumbai
Ahmedabad
Mumbai
Ahmedabad
LI_Personalized Trust & Help
LI_Participation
LI_Access to Services
LI_Reciprocal Trusting Relations with Services
Overall Linking Social capital
High
Medium
Low

Appendix 51: Univariate relations of HIV risk measures with Social Capital (Domains) in Mumbai

Measure	Casual partners			Sex with CSW			Condom use with CSW		
				OR (C.I.)			OR (C.I.)		
	n/N	% of risk	OR (C.I.)	n/N	% of with risk	OR (C.I.)	n/N	% of with risk	OR (C.I.)
Overall Social Capital									
Low	55/319	17.2	1.482 (.897-2.451)	28/319	8.8	1.098 (NS)	7/319	2.2	.654 (NS)
Medium	53/274	19.3	1.706 (1.026-2.837)	35/274	12.8	1.671 (NS)	13/274	4.7	1.452 (NS)
High	26/211	12.3	1.000	17211	8.1		7/211	3.3	
Bonding Social Capital									
Low	49/318	15.4	.703 (.447-1.106)	21/318	6.6	.364 (.205-.647)	8/318	2.5	.465(NS)
Medium	42/277	15.2	.690 (.432-1.103)	25/277	9.0	.511 (.294-.886)	8/277	2.9	.535 (NS)
High	43/209	20.6		34/209	16.3		11/209	5.3	
Bridging Social Capital									
Low	37/232	15.9	.882 (.555-1.402)	24/232	10.3	.957 (NS)	7/232	3.0	.783 (NS)
Medium	46/284	16.2	.890 (.580-1.391)	25/284	8.8	.800 (NS)	9/284	3.2	.824 (NS)
High	51/209	17.7		31/288	10.8		11/288	3.8	
Linking Social Capital									
Low	77/405	19.0	1.789 (1.065-3.003)	44/405	10.9	1.454 (NS)	8/405	2.0	.501 (NS)
Medium	36/218	16.5	1.507 (.842-2.688)	22/218	10.1	1.339 (NS)	12/218	5.5	1.448 (NS)
High	21/181	11.6		14/181	7.7		7/181	3.9	

Note: n=number of migrants with risk behaviour in a particular category; N=number of migrants with particular level of social capital
NS=Non Significant

Appendix 52: Univariate relations of HIV risk with Social Capital (Components) in Mumbai

Measure	Casual partners			Sex with CSW			Condom use with CSW		
				OR (C.I.)			OR (C.I.)		
	n/N	% of risk	OR (C.I.)	n/N	% of risk	OR (C.I.)	n/N	% of risk	OR (C.I.)
BO_Differ									
Low	40/267	15.0	.670 (NS)	23/267	8.6	.627 (NS)	7/267	2.6	.413 (NS)
Medium	43/292	14.7	.657 (NS)	25/292	8.6	.623 (NS)	5/292	1.7	.267 (.096-.746)
High	51/245	20.8		32/245	13.1		15/245	6.1	
BO_PerTruHelp									
Low	69/360	53.1	2.078	38/360	10/6	1.841 (NS)	14/360	3.9	.919 (NS)

			(1.180-3.661)						
Medium	48/278	35.9	1.829 (1.014-3.301)	32/278	11.5	2.029 (NS)	6/278	2.2	.501 (NS)
High	17/166	10.9		10/166	6.0		7/166	4.2	
BO_CommuSense									
Low	41/298	13.8	.497 (.320-.772)	16/298	5.4	.248 (.136-.450)	6/298	2.0	.370 (.138-.988)
Medium	33/259	12.7	.455 (.285-.786)	18/259	6.9	.326 (.183-.581)	8/259	3.1	.574 (NS)
High	60/247	24.3		46/247	18.6		13/247	5.3	
BO_GenTruHelp									
Low	61/321	19.0	1.370 (NS)	33/321	10.3	.852 (NS)	11/321	3.4	.713 (NS)
Medium	36/230	15.7	1.083 (NS)	17/230	7.4	.593 (NS)	4/230	1.7	.355 (NS)
High	37/253	14.6		30/253	11.9		12/253	4.7	
BR_GenTruHelp									
Low	42/236	17.8	1.107 (NS)	24/236	10.2	.999 (NS)	4/236	1.7	.414 (NS)
Medium	47/293	16.0	.977 (NS)	28/293	9.6	.932 (NS)	12/293	4.1	1.025 (NS)
High	45/275	16.4		28/275	10.2		11/275	4.0	
BR_Parti			S (.002)			S (.006)			NS (.630)
Low	69/343	20.1	2.226 (1.363-3.636)	37/343	10.8	2.167 (1.126-4.170)	13/343	3.8	1.576 (NS)
Medium	40/215	18.6	2.021 (1.180-3.459)	30/215	14.0	2.909 (1.474-5.370)	8/215	3.7	1.546 (NS)
High	25/246	10.2		17/246	5.3		6/246	2.4	
BR_TruNeighbor									
Low	30/251	12.0	.562 (.348-.907)	18/251	7.2	.588 (NS)	4/251	1.6	.458 (NS)
Medium	47/260	18.1	.914 (NS)	28/260	10.8	.919 (NS)	13/260	5.0	1.489 (NS)
High	57/293	19.5		34/293	11.6		10/293	3.4	
LI_PerTruServ									
Low	86/386	22.3	2.732 (1.569-4.755)	59/386	15.3	3.857 (1.801-8.257)	17/386	4.4	1.603 (NS)
Medium	31/239	13.0	1.420 (NS)	13/239	5.4	1.237 (NS)	5/239	2.1	.744 (NS)
High	17/179	9.5		8/179	4.5		5/179	2.8	
LI_Parti									
Low	46/248	18.5	1.109 (NS)	28/248	11.3	1.072 (NS)	4/248	1.6	.323 (.106-.987)
Medium	35/245	14.3	.811 (NS)	19/245	7.8	.708 (NS)	8/245	3.3	.666 (NS)
High	53/311	17.0		33/311	10.6		15/311	4.8	
LI_AccesServ									
Low	46/278	16.5	.858 (NS)	23/278	8.3	.596 (NS)	9/278	3.2	.758 (NS)
Medium	48/313	15.3	.783 (NS)	29/313	9.3	.675 (NS)	9/313	2.9	.651 (NS)
High	40/213	18.8		28/213	13.1		9/213	4.2	
LI_RelationServ									
Low	84/439	19.1	2.701 (1.430-5.104)	48/439	10.9	3.536 (1.380-9.057)	13/439	3.0	1.485 (NS)
Medium	38/216	17.6	2.437 (1.227-4.841)	27/216	12.5	4.114 (1.596-10.947)	11/216	5.1	2.611 (NS)
High	12/149	8.1		5/149	3.4		3/149	2.0	

Note: n=number of migrants with risk behaviour in a particular category; N=number of migrants with particular level of social capital
NS=Non Significant

Appendix 53: Multivariate relations of HIV risk with Social Capital (Domains) in Mumbai

Variable	Casual partners		Sex with CSW		Condom use with CSW	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)
BO_Overall (Low)	.574 (.357-.923)		.364 (.205-.647)	.425 (.229-.788)		
BO_Overall (Medium)	.592 (.364-.962)		.511 (.294-.886)	.487 (.272-.872)		
BR_Overall (Low)						
BR_Overall (Medium)						
LI_Overall (Low)	2.144 (1.246-3.668)	2.728 (1.568-4.747)		2.546 (1.295-5.007)		
LI_Overall (Medium)	1.803 (.990-3.285)	1.864 (1.024-3.393)		2.014 (NS)		
Married or not (Married)						169 (.040-.724)
Living with wife or alone (Ref: With wife)						
Duration of migration (Ref: Low)						
Nature of job (Ref: Daily wage)						
Workdays in a month (Ref: Low)		1.698 (1.099-2.622)				3.033 (.990-9.287)
Income (Ref: Low)		1.441 (1.068-1.944)		1.689 (1.169-2.440)		
Income same over months or fluctuating (Ref: fluctating)		2.456 (1.407-4.287)				
Mode of salary receipt (Ref: Daily)				1.521 (1.174-1.969)		1.570 (1.017-2.424)

Note:

- Model 1: Social Capital Domains Only; Model 2: Social Capital Domains, Co-factors and Interactions terms
- NS-Non significant as the confidence intervals include 0.
- High value of social capital measures is reference category.

Appendix 54: Multivariate relations of HIV Risk with Social Capital (Components) in Mumbai

Scale	Casual partners		Sex with CSW		Condom use with CSW	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)
BO_Differences in Community (Low)					.413 (.165-1.030)	.428 (.170-1.082)
BO_Differences in Community (Medium)					.267 (.096-.746)	.288 (.102-.814)
BO_Communitaraian Sense (Low)	.526 (.320-.864)	.781 (NS)	.318 (.168-.602)	.469 (.240-.918)		
BO_Communitaraian Sense (Medium)	.449 (.276-.731)	.553 (.338-.905)	.381 (.210-.691)	.459 (.248-.849)		
BO_Generalized Trust & Help (Low)	1.894 (1.165-3.081)					
BO_Generalized Trust & Help (Medium)	1.491 (NS)					
BR_Particiaption (Low)	1.973 (1.189-3.272)	1.899 (1.130-3.194)	1.603 (NS)	1.715 (NS)		
BR_Particiaption (Medium)	1.993 (1.151-3.449)	2.018 (1.158-3.517)	2.618 (1.298-5.283)	2.579 (1.261-5.273)		
LI_Personal Trust in Services (Low)	2.334 (1.313-4.148)	2.392 (1.289-4.439)	2.446 (1.083-5.525)	2.838 (1.231-6.543)		
LI_Personal Trust in Services (Medium)	1.445 (NS)	1.353 (NS)	1.141 (NS)	1.138 (NS)		
LI_Reciprocal Trusting Relations with Services (Low)		2.185 (1.115-4.283)	2.956 (1.115-7.835)	3.105 (1.160-8.309)		
LI_Reciprocal Trusting Relations with Services (Medium)		2.077 (1.024-4.211)	3.247 (1.190-8.859)	2.993 (1.086-8.250)		
Married or not (Ref: Married)						.162 (.038-.692)
No. of working days in a month (Ref: Low)						3.832 (1.311-11.201)
Income (Ref: Low)		1.672 (1.254-2.229)		1.838 (1.264-2.672)		
Income steady or fluctuating (Ref: Fluctuating)		1.928 (1.077-3/452)				
Mode of salary receipt (Daily)				1.395 (1.069-1.821)		

Note:

NS-Non significant as the confidence intervals include 0.

Value “high” is the reference category for all the social capital components.

Appendix 55: Univariate relations of HIV risk measures with Social Capital (Domains) in Ahmedabad

Measure	Casual partners			Sex with CSW			Condom use with CSW		
				OR (C.I.)			OR (C.I.)		
	n/N	% of risk	OR (C.I.)	n/N	% of with risk	OR (C.I.)	n/N	% of with risk	OR (C.I.)
Overall Social Capital									
Low	88/241	41.1	1.310 (.917-1.869)	57/214	26.6	1.663 (1.091-2.504)	55/214	25.7	4.965 (2.894-8.493)
Medium	51/258	19.8	.462 (.315-.677)	23/258	8.9	.445 (.266-.745)	20258	7.8	1.204 (NS)
High	112/322	34.8		58/322	18.0		21/322	6.5	
Bonding Social Capital									
Low	75/215	34.9	1.071 (NS)	54/215	25.1	1.754 (1.144-2.691)	50/215	23.3	3.788 (2.246-6.387)
Medium	68/255	26.7	.727 (NS)	32/255	12.5	.751 (NS)	22/255	8.6	1.180 (NS)
High	106/324	33.3		52/324	16.0		24/324	7.4	
Bridging Social Capital									
Low	109/300	36.3	1.269 (NS)	69/300	23.0	1.531 (.993-2.359)	64/300	21.3	4.475 (2.441-8.203)
Medium	66/249	26.5	.802 (NS)	29/249	11.6	.676 (NS)	18/249	7.2	1.286 (NS)
High	76/245	31.0		40/245	16.3		14/245	5.7	
Linking Social Capital									
Low	36/128	28.1	.682 (NS)	14/128	10.9	.423 (.230-.777)	14/128	10.9	.880 (NS)
Medium	87/315	27.6	.665 (.478-.924)	45/315	14.3	.574 (.384-.859)	39/315	12.4	1.012 (NS)
High	128/351	36.5		79/351	22.5		43/351	12.3	

Note:
S=Significant; NS=Non Significant

Appendix 56: Univariate relations of HIV risk with Social Capital (Components) in Ahmedabad

Measure	Casual partners			Sex with CSW			Condom use with CSW		
				OR (C.I.)			OR (C.I.)		
	n/N	% of risk	OR (C.I.)	n/N	% of risk	OR (C.I.)	n/N	% of risk	OR (C.I.)
BO_Differ			NS (.064)			S (.004)			S (.000)
Low	98/266	36.8	1.517 (1.060-2.171)	63/266	23,7	1.981 (1.276-3.077)	59/266	22.2	5.578 (3.031-10.266)
Medium	73/240	30.4	1.137 (NS)	36/240	15.0	1.127 (NS)	23/240	9.6	2.074 (1.043-4.127)
High	80/288	27.8		39/288	13.5		24/288	4.9	
BO_PerTruHelp			S (.000)			S (.001)			S (.033)
Low	31/173	17.9	.375 (.241-.584)	14/173	8.1	.349 (.191-.637)	11/173	6.4	.430 9.218-.849)
Medium	85/254	33.5	.864 (NS)	50/254	19.7	.883 (NS)	35/254	13.8	1.013 (NS)
High	135/367	36.8		74/367	20.2		50/367	13.6	
BO_CommuSense			NS (.058)			S (.000)			S (.000)
Low	60/235	25.5	.658 (.449-.963)	26/235	11.1	.684 (NS)	17/235	7.2	.748 (NS)
Medium	93273	34.1	.991 (NS)	68/273	24.9	1.824 (1.196-2.783)	52/273	19.0	2.257 (1.371-3.715)
High	98/286	34.3		44/286	15.4		27/286	9.4	
BO_GenTruHelp			S (.000)			S (.000)			S (.000)
Low	97/212	45.8	2.037 (1.402-2.758)	70/212	33.0	2.874 (1.855-4.452)	65/212	30.7	5.748 (3.348-9.868)
Medium	72/302	23.8	.756 (NS)	27/302	8.9	.572 9.342-.959)	11/302	3.6	.491 (NS)
High	82/280	29.3		41/280	14.6		20/280	7.1	
BR_GenTruHelp			S (.039)			S (.000)			S (.0000
Low	110/297	37.0	1.463 (1.022-2.099)	75/297	25.3	2.303 (1.470-3.611)	63/297	21.2	4.362 (2.415-7.876)
Medium	67/239	28.0	.969 (NS)	30/239	12.6	.979 (NS)	18/237	7.5	1.319 (NS)
High	74/258	28.7		33/258	12.8		15/258	5.8	
BR_Parti			S (.019)			S (.000)			S (.000)
Low	72/190	37.9	1.220 (NS)	49/190	25.8	1.521 (.979-2.365)	42/190	22.1	2.827 (1.665-4.799)
Medium	84/319	26.3	.715 (NS)	36/319	11.3	.557 (.352-.880)	28/319	8.8	.958 (NS)
High	95/285	33.3		53/285	18.6		26/285	9.1	
BR_TruNeighbor			NS (.226)			S (.010)			S (.000)
Low	100/283	35.3	1.250 (NS)	60/283	21.2	1.135 (NS)	53/283	18.7	3.023 (1.698-5.380)
Medium	78/271	28.8	.925 (NS)	32/271	11.8	.565 (.346-.921)	26/271	9.6	1.392 (NS)
High	73/240	30.4		46/240	19.2		17/240	7.1	
LI_PerTruServ			NS (.527)			S (.021)			S (.000)
Low	41/147	27.9	.784 (NS)	15/147	10.2	.535 (.294-.975)	13/147	8.8	1.048 (NS)
Medium	93/293	31.7	.942 (NS)	61/293	20.8	1.238 (NS)	53/293	18.1	2.385 (1.479-

									3.846)
High	117/354	33.1		62/354	17.5		30/354	8.5	
LI_Parti			NS (.599)			NS (.299)			NS (.099)
Low	86/285	30.2	.830 (NS)	42/285	14.7	.699 (NS)	26/285	9.1	.725 (NS)
Medium	89/287	31.0	.864 (NS)	52/287	18.1	.895 (NS)	43/287	15.0	1.273 (NS)
High	76/222	34.2		44/222	19.8		27/222	12.2	
LI_AccesServ			NS (.534)			NS (.079)			S (.000)
Low	81/255	31.8	1.103 (NS)	36/255	14.1	.810 (NS)	32/255	12.5	2.043 (1.147-3.6390
Medium	75/219	34.2	1.234 (NS)	48/219	21.9	1.363 (NS)	43/219	19.6	3.479 (1.999-6.054)
High	95/320	29.7		54/320	16.9		21/320	6.3	
LI_RelationServ			S (.006)			S (.000)			S (.004)
Low	20/94	21.3	.470 (.275-.802)	7/94	7.4	.250 (.112-.559)	7/94	7.4	.420 (.186-.951)
Medium	90/314	28.7	.698 (.507-.962)	37/314	11.8	.415 (.274-.628)	27/314	8.6	.492 (.305-.794)
High	141/386	36.5		94/386	24.4		62/386	16.1	

Note:
S=Significant; NS=Non Significant

Appendix 57: Multivariate relations of HIV risk with Social Capital (Domains) in Ahmedabad

Variable	Casual partners		Sex with CSW		Condom use with CSW	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)
BO_Overall (Low)			1.849 (1.122-3.049)	1.778 (1.028-3.076)	2.738 (1.522-4.9240	2.271 (1.196-4.313)
BO_Overall (Medium)			.836 (NS)	.827 (NS)	1.108 (NS)	.953 (NS)
BR_Overall (Low)	1.757 (1.169-2.640)	1.786 (1.161-2.747)	2.215 (1.307-3.754)	2.403 (1.357-4.256)	4.736 (2.377-9.439)	6.247 (2.910-13.410)
BR_Overall (Medium)	.889 (NS)	.983 (NS)	.764 (NS)	.879 (NS)	1.295 (NS)	1.857 (NS)
LI_Overall (Low)	.463 (.280-.766)	.476 (.280-.811)	.188 (.094-.374)	.214 (.103-.447)	.259 (.126-.534)	.300 (.139-.648)
LI_Overall (Medium)	.575 (.405-.815)	.567 (.393-.818)	.404 (.258-.632)	.400 (.249-.642)	.566 (.337-.951)	.582 (NS)
Living with wife or alone (Ref: With wife)		1.865 (1.508-2.307)		2.102 (1.570-2.183)		2.175 (1.540-3.070)
Duration of migration (Ref: Low)		1.289 (1.000-1.662)				1.585 (1.076-2.336)
Nature of job (Ref: Daily wage)		1.417 (1.151-1.746)		1.597 (1.214-2.100)		1.698 (1.235-2.334)
Income (Ref: Low)				1.436 (1.012-2.038)		
Income same over months or fluctuating (Ref: same)		1.934 (1.356-2.758)		2.492 (1.577-3.938)		2.556 (1.477-4.421)
Mode of salary receipt (Ref: Daily)		.762 (.584-.992)		.695 (.505-.929)		.575 (.409-.808)

Note:

- Model 1: Social Capital Domains Only; Model 2: Social Capital Domains, Co-factors and Interactions terms
- NS-Non significant as the confidence intervals include 0.
- High value of social capital measures is reference category.

Appendix 58: Multivariate relations of HIV Risk with Social Capital (Components) in Ahmedabad

Scale	Casual partners		Sex with CSW		Condom use with CSW	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)	OR (C.I.)
BO_Differences in community (Low)				2.345 (1.338-4.110)	4.647 (2.394-9.019)	6.714 (3.313-13.605)
BO_Differences in community (Medium)				1.438 (NS)	2.247 (1.083-4.6630	2.912 (1.365-6.210)
BO_Personal Trust and Help (Low)	.365 (.232-.572)	.363 (.228-.577)	.369 (.189-.719)	.306 (.151-.619)	.288 (.136-.610)	.289 (.130-.641)
BO_Personal Trust and Help (Medium)	.800 (NS)	.754 (NS)	.751 (NS)	.644 (NS)	.661 (NS)	.639 (NS)
BO_Generalized Trust & Help (Low)	1.964 (1.343-2.874)	2.029 (1.360-3.027)	2.680 (1.593-4.510)	3.354 (1.883-5.976)	3.379 (1.832-6.232)	4.044 (2.145-7.624)
BO_Generalized Trust & Help (Medium)	.710 (NS)	.696 (NS)	.613 (NS)	.726 (NS)	.448 (.206-.975)	.486 (NS)
BR_Generalized Trust & Help (Low)			2.001 (1.171-3.419)	1.899 (1.071-3.368)	2.512 (1.264-4.991)	2.609 (1.266-5.374)
BR_Generalized Trust & Help (Medium)			.969 (NS)	.838 (NS)	.822 (NS)	.856 (NS)
BR_Particiaption (Low)			1.336 (NS)	.960 (NS)		
BR_Particiaption (Medium)			.613 (NS)	.543 (.314-.939)		
BR_Trust in Neighbors (low)			1.352 (NS)	1.122 (NS)		
BR_Trust in Neighbors (medium)			.619 (NS)	.518 (.289-.930)		
LI_Access to services (Low)				.432 (.233-.800)	1.002 (NS)	
LI_Access to services (Medium)				.643 (NS)	1.891 (1.010-3.539)	
LI_Reciprocal Trusting Relations with Services (Low)				.380 (.155-.931)		
LI_Reciprocal Trusting Relations with Services (Medium)				.492 (.305-793)		
Living with wife or alone (Ref: With wife)		1.774 (1.447-2.173)		2.422 (1.763-3.327)		2.498 (1.728-3.613)
Nature of job (Ref: daily wage)		1.488 (1.214-1.824)				
No. of working days in a month (Ref: Low)				2.773 (1.117-6.884)		
Income (Ref: Low)				1.663 (1.137-2.432)		1.903 (1.221-2.964)
Income steady or fluctuating (Ref: Steady)		1.777 (1.256-2.513)		1.914 (1.184-3.096)		2.314 (1.293-4.140)
Mode of salary receipt				.679 (.482-.957)		.614 (.431-.876)

Note: NS-Non significant as the confidence intervals include 0.
Value "high" is the reference category for all the social capital components.

Appendix 59: SC Domains & Casual Partners_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 1	T_BO_Overall			6.287	2	.043			
	T_BO_Overall(1)	-.274	.157	3.068	1	.080	.760	.559	1.033
	T_BO_Overall(2)	-.360	.149	5.863	1	.015	.698	.521	.934
	T_BR_Overall			11.373	2	.003			
	T_BR_Overall(1)	.407	.156	6.803	1	.009	1.503	1.107	2.041
	T_BR_Overall(2)	-.078	.151	.268	1	.605	.925	.688	1.243
	T_LI_Overall			8.143	2	.017			
	T_LI_Overall(1)	-.448	.158	8.021	1	.005	.639	.468	.871
	T_LI_Overall(2)	-.252	.146	2.959	1	.085	.777	.583	1.036
	Constant	-.855	.129	43.850	1	.000	.425		

Appendix 60: Sc Domains and casual partners_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 2[a]	T_BO_Overall			6.270	2	.043			
	T_BO_Overall(1)	-.555	.242	5.249	1	.022	.574	.357	.923
	T_BO_Overall(2)	-.525	.248	4.480	1	.034	.592	.364	.962
	T_LI_Overall			7.584	2	.023			
	T_LI_Overall(1)	.762	.277	7.582	1	.006	2.144	1.246	3.688
	T_LI_Overall(2)	.590	.306	3.709	1	.054	1.803	.990	3.285
	Constant	-1.788	.249	51.700	1	.000	.167		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall.

Appendix 61: SC Domains and casual partners_ Ahmedabad

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 2[a]	T_BR_Overall			12.633	2	.002			
	T_BR_Overall(1)	.563	.208	7.351	1	.007	1.757	1.169	2.640
	T_BR_Overall(2)	-.117	.203	.335	1	.563	.889	.598	1.323
	T_LI_Overall			13.212	2	.001			
	T_LI_Overall(1)	-.769	.256	8.994	1	.003	.463	.280	.766
	T_LI_Overall(2)	-.554	.178	9.670	1	.002	.575	.405	.815
	Constant	-.625	.147	18.007	1	.000	.535		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall.

Appendix 62: Sc Domains and Casual partners (with Sociodemographic) _Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 9[a]	T_BO_Overall			5.904	2	.052			
	T_BO_Overall(1)	-.197	.162	1.482	1	.223	.821	.598	1.128
	T_BO_Overall(2)	-.369	.152	5.899	1	.015	.691	.513	.931
	T_BR_Overall			7.408	2	.025			
	T_BR_Overall(1)	.301	.163	3.411	1	.065	1.351	.982	1.860
	T_BR_Overall(2)	-.115	.157	.535	1	.464	.891	.655	1.213
	wife4	.466	.085	30.237	1	.000	1.593	1.350	1.881
	drnmgr5b	.204	.092	4.888	1	.027	1.226	1.023	1.470
	job8	.519	.083	39.237	1	.000	1.680	1.428	1.977
	wrkdys9	.571	.173	10.964	1	.001	1.771	1.263	2.483
	incflt11(1)	.401	.156	6.643	1	.010	1.493	1.101	2.026
	Constant	-5.834	.679	73.774	1	.000	.003		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 63: Sc Domains and Casual partners (with Sociodemographic) _Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 3[a]	wrkdys9	.529	.222	5.699	1	.017	1.698	1.099	2.622
	ernmnt10	.365	.153	5.719	1	.017	1.441	1.068	1.944
	incflt11(1)	.898	.284	9.990	1	.002	2.456	1.407	4.287
	T_LI_Overall			12.953	2	.002			
	T_LI_Overall(1)	1.004	.283	12.614	1	.000	2.728	1.568	4.747
	T_LI_Overall(2)	.623	.306	4.150	1	.042	1.864	1.024	3.393
	Constant	-4.552	.642	50.328	1	.000	.011		

a. Variable(s) entered on step 1: wrkdys9, ernmnt10, incflt11, T_BO_Overall, T_BR_Overall, T_LI_Overall.

Appendix 64: Sc Domains and Casual partners (with Sociodemographic) _Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 9[a]	T_BR_Overall			9.978	2	.007			
	T_BR_Overall(1)	.580	.220	6.963	1	.008	1.786	1.161	2.747
	T_BR_Overall(2)	-.018	.214	.007	1	.934	.983	.646	1.494
	T_LI_Overall			11.842	2	.003			
	T_LI_Overall(1)	-.742	.271	7.467	1	.006	.476	.280	.811
	T_LI_Overall(2)	-.568	.187	9.224	1	.002	.567	.393	.818
	wife4	.623	.109	33.011	1	.000	1.865	1.508	2.307
	drnmgr5b	.254	.130	3.849	1	.050	1.289	1.000	1.662
	job8	.349	.106	10.767	1	.001	1.417	1.151	1.746
	incflt11(1)	.660	.181	13.278	1	.000	1.934	1.356	2.758
	recslr12	-.272	.135	4.075	1	.044	.762	.584	.992
	Constant	-3.349	.789	18.038	1	.000	.035		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 65: SC Components and casual partners_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	T_BO_PERTRUHELP			16.848	2	.000			
	T_BO_PERTRUHELP(1)	-.629	.154	16.762	1	.000	.533	.395	.721
	T_BO_PERTRUHELP(2)	-.243	.144	2.847	1	.092	.784	.591	1.040
	T_BO_COMMUSENSE			21.535	2	.000			
	T_BO_COMMUSENSE(1)	-.685	.153	19.982	1	.000	.504	.373	.681
	T_BO_COMMUSENSE(2)	-.465	.145	10.237	1	.001	.628	.472	.835
	T_BO_GENTRUHELP			19.057	2	.000			
	T_BO_GENTRUHELP(1)	.527	.151	12.203	1	.000	1.693	1.260	2.275
	T_BO_GENTRUHELP(2)	-.072	.153	.220	1	.639	.931	.689	1.257
	T_BR_GENTRUHELP			8.381	2	.015			
	T_BR_GENTRUHELP(1)	.387	.152	6.515	1	.011	1.472	1.094	1.982
	T_BR_GENTRUHELP(2)	.029	.153	.035	1	.852	1.029	.763	1.388
	Constant	-.819	.154	28.193	1	.000	.441		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 66: SC Components and casual partners_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	T_BO_COMMUSENSE			11.799	2	.003			
	T_BO_COMMUSENSE(1)	-.642	.253	6.432	1	.011	.526	.320	.864
	T_BO_COMMUSENSE(2)	-.800	.249	10.359	1	.001	.449	.276	.731
	T_BO_GENTRUHELP			6.656	2	.036			
	T_BO_GENTRUHELP(1)	.639	.248	6.634	1	.010	1.894	1.165	3.081
	T_BO_GENTRUHELP(2)	.350	.265	1.737	1	.188	1.419	.843	2.386
	T_BR_PARTI			7.945	2	.019			
	T_BR_PARTI(1)	.679	.258	6.929	1	.008	1.973	1.189	3.272
	T_BR_PARTI(2)	.689	.280	6.066	1	.014	1.993	1.151	3.449
	T_LI_PERTRUSERV			9.962	2	.007			
	T_LI_PERTRUSERV(1)	.848	.293	8.341	1	.004	2.334	1.313	4.148
	T_LI_PERTRUSERV(2)	.368	.323	1.295	1	.255	1.445	.767	2.722
	Constant	-2.592	.382	46.133	1	.000	.075		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 67: SC components and casual partners_Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 10[a]	T_BO_PERTRUHELP			19.301	2	.000			
	T_BO_PERTRUHELP(1)	-1.009	.230	19.296	1	.000	.365	.232	.572
	T_BO_PERTRUHELP(2)	-.223	.176	1.610	1	.205	.800	.567	1.129
	T_BO_GENTRUHELP			27.733	2	.000			
	T_BO_GENTRUHELP(1)	.675	.194	12.100	1	.001	1.964	1.343	2.874
	T_BO_GENTRUHELP(2)	-.343	.191	3.211	1	.073	.710	.488	1.033
	Constant	-.588	.154	14.596	1	.000	.556		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 68: SC Components and casual partners (with sociodemographic characteristics)_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 15[a]	T_BO_PERTRUHELP			12.991	2	.002			
	T_BO_PERTRUHELP(1)	-.631	.176	12.849	1	.000	.532	.377	.751
	T_BO_PERTRUHELP(2)	-.238	.153	2.427	1	.119	.788	.585	1.063
	T_BO_COMMUSENSE			11.422	2	.003			
	T_BO_COMMUSENSE(1)	-.467	.158	8.736	1	.003	.627	.460	.854
	T_BO_COMMUSENSE(2)	-.424	.151	7.912	1	.005	.655	.487	.879
	T_BO_GENTRUHELP			29.886	2	.000			
	T_BO_GENTRUHELP(1)	.668	.155	18.633	1	.000	1.951	1.440	2.643
	T_BO_GENTRUHELP(2)	-.120	.157	.586	1	.444	.887	.653	1.206
	T_LI_PERTRUSERV			7.695	2	.021			
	T_LI_PERTRUSERV(1)	.432	.174	6.173	1	.013	1.540	1.095	2.165
	T_LI_PERTRUSERV(2)	.025	.154	.027	1	.869	1.026	.759	1.387
	wife4	.412	.079	26.989	1	.000	1.510	1.293	1.764
	job8	.514	.085	36.656	1	.000	1.672	1.416	1.975
	wrkdys9	.550	.171	10.306	1	.001	1.733	1.239	2.423
	incflt11(1)	.331	.159	4.339	1	.037	1.393	1.020	1.902
	Constant	-4.989	.618	65.216	1	.000	.007		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 69: SC Components and casual partners (with sociodemographic characteristics)_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 17[a]	T_BO_COMMUSENSE			5.568	2	.062			
	T_BO_COMMUSENSE(1)	-.247	.252	.956	1	.328	.781	.476	1.281
	T_BO_COMMUSENSE(2)	-.593	.251	5.564	1	.018	.553	.338	.905
	T_BR_PARTI			7.390	2	.025			
	T_BR_PARTI(1)	.642	.265	5.855	1	.016	1.899	1.130	3.194
	T_BR_PARTI(2)	.702	.284	6.131	1	.013	2.018	1.158	3.517
	T_LI_PERTRUSERV			9.993	2	.007			
	T_LI_PERTRUSERV(1)	.872	.315	7.642	1	.006	2.392	1.289	4.439
	T_LI_PERTRUSERV(2)	.302	.334	.818	1	.366	1.353	.703	2.605
	T_LI_RELATIOSERV			5.345	2	.069			
	T_LI_RELATIOSERV(1)	.782	.343	5.180	1	.023	2.185	1.115	4.283
	T_LI_RELATIOSERV(2)	.731	.361	4.105	1	.043	2.077	1.024	4.211
	ernmnt10	.514	.147	12.254	1	.000	1.672	1.254	2.229
	incflt11(1)	.656	.297	4.878	1	.027	1.928	1.077	3.452
	Constant	-4.174	.569	53.815	1	.000	.015		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, ernmnt10, incflt11, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, job8, wrkdys9, recslr12.

Appendix 70: SC components and casual partners (with sociodemographic characteristics)_Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 19[a]	T_BO_PERTRUHELP			18.312	2	.000			
	T_BO_PERTRUHELP(1)	-1.014	.237	18.256	1	.000	.363	.228	.577
	T_BO_PERTRUHELP(2)	-.283	.183	2.398	1	.121	.754	.527	1.078
	T_BO_GENTRUHELP			27.485	2	.000			
	T_BO_GENTRUHELP(1)	.707	.204	12.001	1	.001	2.029	1.360	3.027
	T_BO_GENTRUHELP(2)	-.363	.197	3.407	1	.065	.696	.473	1.023
	wife4	.573	.104	30.532	1	.000	1.774	1.447	2.173
	job8	.397	.104	14.649	1	.000	1.488	1.214	1.824
	incflt11(1)	.575	.177	10.552	1	.001	1.777	1.256	2.513
	Constant	-3.702	.506	53.471	1	.000	.025		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 71: SC Domains and Sex with CSWs_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 2[a]	T_BR_Overall			18.682	2	.000			
	T_BR_Overall(1)	.556	.182	9.312	1	.002	1.743	1.220	2.491
	T_BR_Overall(2)	-.220	.194	1.280	1	.258	.803	.549	1.175
	T_LI_Overall			16.698	2	.000			
	T_LI_Overall(1)	-.761	.192	15.746	1	.000	.467	.321	.680
	T_LI_Overall(2)	-.471	.178	7.015	1	.008	.624	.441	.885
	Constant	-1.603	.144	124.297	1	.000	.201		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall.

Appendix 72: SC Domains and Sex with CSWs_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 3[a]	T_BO_Overall			12.907	2	.002			
	T_BO_Overall(1)	-1.011	.293	11.865	1	.001	.364	.205	.647
	T_BO_Overall(2)	-.672	.281	5.712	1	.017	.511	.294	.886
	Constant	-1.638	.187	76.423	1	.000	.194		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall.

Appendix 73: SC Domains and Sex with CSWs_Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 1	T_BO_Overall			9.961	2	.007			
	T_BO_Overall(1)	.615	.255	5.809	1	.016	1.849	1.122	3.049
	T_BO_Overall(2)	-.179	.253	.504	1	.478	.836	.509	1.371
	T_BR_Overall			17.028	2	.000			
	T_BR_Overall(1)	.795	.269	8.728	1	.003	2.215	1.307	3.754
	T_BR_Overall(2)	-.269	.272	.984	1	.321	.764	.449	1.301
	T_LI_Overall			28.118	2	.000			
	T_LI_Overall(1)	-1.674	.352	22.627	1	.000	.188	.094	.374
	T_LI_Overall(2)	-.907	.228	15.784	1	.000	.404	.258	.632
	Constant	-1.402	.196	51.306	1	.000	.246		

Appendix 74: SC Domains and Sex with CSWs (with sociodemographics)_Overall (I)

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 9[a]	T_BR_Overall			17.198	2	.000			
	T_BR_Overall(1)	.535	.193	7.671	1	.006	1.707	1.169	2.493
	T_BR_Overall(2)	-.253	.202	1.567	1	.211	.776	.522	1.154
	T_LI_Overall			12.224	2	.002			
	T_LI_Overall(1)	1.501	.439	11.704	1	.001	4.486	1.898	10.598
	T_LI_Overall(2)	.609	.269	5.122	1	.024	1.838	1.085	3.113
	age1	.313	.138	5.128	1	.024	1.367	1.043	1.792
	job8	.539	.101	28.480	1	.000	1.715	1.407	2.091
	wrkdys9	.599	.232	6.664	1	.010	1.820	1.155	2.866
	ernmnt10	.378	.125	9.112	1	.003	1.460	1.142	1.866
	incflt11(1)	.814	.195	17.466	1	.000	2.257	1.541	3.306
	T_LI_OverallXWife4	.280	.054	26.616	1	.000	1.323	1.190	1.471
	Constant	-9.019	1.029	76.855	1	.000	.000		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12, T_LI_OverallXWife4.

Appendix 75: SC Domains and Sex with CSWs (with sociodemographics)_Overall (II)

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 2[a]	T_BR_Overall			14.262	2	.001			
	T_BR_Overall(1)	.399	.183	4.724	1	.030	1.490	1.040	2.134
	T_BR_Overall(2)	-.316	.200	2.507	1	.113	.729	.493	1.078
	age1	.321	.141	5.172	1	.023	1.379	1.045	1.819
	wife4	.600	.124	23.532	1	.000	1.821	1.429	2.320
	job8	.579	.099	34.095	1	.000	1.784	1.469	2.167
	wrkdys9	.627	.231	7.376	1	.007	1.873	1.191	2.945
	ernmnt10	.386	.125	9.568	1	.002	1.471	1.152	1.879
	incflt11(1)	.756	.192	15.423	1	.000	2.129	1.460	3.104
	Constant	-8.502	.921	85.242	1	.000	.000		

a. Variable(s) entered on step 1: T_BR_Overall, T_LI_Overall, age1, wife4, job8, wrkdys9, ernmnt10, incflt11.

Appendix 76: SC Domains and Sex with CSWs (withs ociodemographics)_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 12[a]	T_BO_Overall			9.078	2	.011			
	T_BO_Overall(1)	-.857	.316	7.369	1	.007	.425	.229	.788
	T_BO_Overall(2)	-.719	.297	5.860	1	.015	.487	.272	.872
	T_LI_Overall			7.333	2	.026			
	T_LI_Overall(1)	.934	.345	7.333	1	.007	2.546	1.295	5.007
	T_LI_Overall(2)	.700	.377	3.442	1	.064	2.014	.961	4.219
	ernmnt10	.524	.188	7.805	1	.005	1.689	1.169	2.440
	recslr12	.419	.132	10.103	1	.001	1.521	1.174	1.969
	Constant	-4.742	.649	53.344	1	.000	.009		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 77: SC Domains and Sex with CSWs (with sociodemographics) _Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	T_BO_Overall			7.990	2	.018			
	T_BO_Overall(1)	.576	.280	4.242	1	.039	1.778	1.028	3.076
	T_BO_Overall(2)	-.190	.269	.500	1	.479	.827	.488	1.400
	T_BR_Overall			14.577	2	.001			
	T_BR_Overall(1)	.877	.292	9.044	1	.003	2.403	1.357	4.256
	T_BR_Overall(2)	-.129	.288	.201	1	.654	.879	.500	1.545
	T_LI_Overall			22.573	2	.000			
	T_LI_Overall(1)	-1.540	.374	16.918	1	.000	.214	.103	.447
	T_LI_Overall(2)	-.916	.242	14.363	1	.000	.400	.249	.642
	wife4	.743	.149	24.949	1	.000	2.102	1.570	2.813
	job8	.468	.140	11.222	1	.001	1.597	1.214	2.100
	ernmnt10	.362	.179	4.102	1	.043	1.436	1.012	2.038
	incflt11(1)	.913	.234	15.282	1	.000	2.492	1.577	3.938
	recslr12	-.379	.156	5.925	1	.015	.685	.505	.929
	Constant	-4.862	.954	25.960	1	.000	.008		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 78: SC Components and Sex with CSWs_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	T_BO_COMMUSENSE			23.963	2	.000			
	T_BO_COMMUSENSE(1)	-1.010	.209	23.359	1	.000	.364	.242	.549
	T_BO_COMMUSENSE(2)	-.254	.175	2.109	1	.146	.776	.551	1.093
	T_BO_GENTRUHELP			28.369	2	.000			
	T_BO_GENTRUHELP(1)	.619	.183	11.473	1	.001	1.857	1.298	2.656
	T_BO_GENTRUHELP(2)	-.415	.206	4.031	1	.045	.661	.441	.990
	T_BR_GENTRUHELP			9.810	2	.007			
	T_BR_GENTRUHELP(1)	.466	.187	6.234	1	.013	1.594	1.105	2.298
	T_BR_GENTRUHELP(2)	-.042	.201	.043	1	.836	.959	.647	1.422
	T_LI_RELATIOSERV			14.029	2	.001			
	T_LI_RELATIOSERV(1)	-.667	.187	12.729	1	.000	.513	.356	.740
	T_LI_RELATIOSERV(2)	-.446	.179	6.188	1	.013	.640	.450	.910
	Constant	-1.435	.192	56.075	1	.000	.238		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 79: SC Components and Sex with CSWs_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	T_BO_COMMUSENSE			16.963	2	.000			
	T_BO_COMMUSENSE(1)	-1.145	.325	12.378	1	.000	.318	.168	.602
	T_BO_COMMUSENSE(2)	-.964	.303	10.099	1	.001	.381	.210	.691
	T_BR_PARTI			7.616	2	.022			
	T_BR_PARTI(1)	.472	.348	1.835	1	.176	1.603	.810	3.172
	T_BR_PARTI(2)	.963	.358	7.222	1	.007	2.618	1.298	5.283
	T_LI_PERTRUSERV			8.222	2	.016			
	T_LI_PERTRUSERV(1)	.894	.416	4.626	1	.031	2.446	1.083	5.525
	T_LI_PERTRUSERV(2)	.132	.475	.077	1	.781	1.141	.450	2.895
	T_LI_RELATIOSERV			5.482	2	.064			
	T_LI_RELATIOSERV(1)	1.084	.497	4.751	1	.029	2.956	1.115	7.835
	T_LI_RELATIOSERV(2)	1.178	.512	5.289	1	.021	3.247	1.190	8.859
	Constant	-3.653	.622	34.472	1	.000	.026		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 80: SC Components and Sex with CSWs_Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 5[a]	T_BO_PERTRUHELP			8.668	2	.013			
	T_BO_PERTRUHELP(1)	-.998	.341	8.581	1	.003	.369	.189	.719
	T_BO_PERTRUHELP(2)	-.286	.237	1.459	1	.227	.751	.472	1.195
	T_BO_GENTRUHELP			30.126	2	.000			
	T_BO_GENTRUHELP(1)	.986	.266	13.783	1	.000	2.680	1.593	4.510
	T_BO_GENTRUHELP(2)	-.489	.278	3.095	1	.079	.613	.356	1.057
	T_BR_GENTRUHELP			10.256	2	.006			
	T_BR_GENTRUHELP(1)	.694	.273	6.444	1	.011	2.001	1.171	3.419
	T_BR_GENTRUHELP(2)	-.032	.298	.011	1	.915	.969	.541	1.737
	T_BR_PARTI			8.682	2	.013			
	T_BR_PARTI(1)	.290	.265	1.198	1	.274	1.336	.795	2.246
	T_BR_PARTI(2)	-.489	.263	3.455	1	.063	.613	.366	1.027
	T_BR_TRUNEIGHBOR			8.461	2	.015			
	T_BR_TRUNEIGHBOR(1)	.301	.280	1.156	1	.282	1.352	.780	2.342
	T_BR_TRUNEIGHBOR(2)	-.479	.279	2.940	1	.086	.619	.358	1.071
	T_LI_ACCESSERV			7.252	2	.027			
	T_LI_ACCESSERV(1)	-.747	.291	6.587	1	.010	.474	.268	.838
	T_LI_ACCESSERV(2)	-.189	.274	.474	1	.491	.828	.484	1.417
	T_LI_RELATIOSERV			12.752	2	.002			
	T_LI_RELATIOSERV(1)	-1.028	.447	5.289	1	.021	.358	.149	.859
	T_LI_RELATIOSERV(2)	-.726	.231	9.899	1	.002	.484	.308	.760
	Constant	-1.063	.276	14.871	1	.000	.345		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 81: SC Components and Sex with CSWs (with sociodemographics)_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 13[a]	T_BO_PERTRUHELP			5.653	2	.059			
	T_BO_PERTRUHELP(1)	-.543	.235	5.322	1	.021	.581	.366	.922
	T_BO_PERTRUHELP(2)	-.135	.192	.495	1	.482	.874	.600	1.272
	T_BO_COMMUSENSE			9.559	2	.008			
	T_BO_COMMUSENSE(1)	-.657	.216	9.291	1	.002	.518	.340	.791
	T_BO_COMMUSENSE(2)	-.158	.183	.749	1	.387	.854	.597	1.221
	T_BO_GENTRUHELP			36.699	2	.000			
	T_BO_GENTRUHELP(1)	.710	.187	14.402	1	.000	2.034	1.410	2.934
	T_BO_GENTRUHELP(2)	-.506	.211	5.751	1	.016	.603	.399	.912
	T_LI_PERTRUSERV			8.917	2	.012			
	T_LI_PERTRUSERV(1)	.655	.227	8.295	1	.004	1.925	1.233	3.006
	T_LI_PERTRUSERV(2)	.152	.195	.603	1	.438	1.164	.793	1.707
	T_LI_RELATIOSERV			6.762	2	.034			
	T_LI_RELATIOSERV(1)	-.477	.225	4.498	1	.034	.621	.400	.964
	T_LI_RELATIOSERV(2)	-.430	.189	5.175	1	.023	.650	.449	.942
	age1	.275	.143	3.671	1	.055	1.316	.994	1.744
	wife4	.606	.126	22.973	1	.000	1.832	1.430	2.347
	job8	.523	.104	25.473	1	.000	1.687	1.377	2.068
	wrkdys9	.650	.240	7.332	1	.007	1.915	1.197	3.065
	ernmnt10	.322	.128	6.306	1	.012	1.379	1.073	1.773
	incflt11(1)	.612	.199	9.445	1	.002	1.844	1.248	2.725
	Constant	-7.814	.978	63.852	1	.000	.000		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 82: SC Components and Sex with CSWs (with sociodemographics)_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 18[a]	T_BO_COMMUSENSE			8.222	2	.016			
	T_BO_COMMUSENSE(1)	-.757	.343	4.882	1	.027	.469	.240	.918
	T_BO_COMMUSENSE(2)	-.778	.313	6.169	1	.013	.459	.248	.849
	T_BR_PARTI			6.828	2	.033			
	T_BR_PARTI(1)	.539	.354	2.319	1	.128	1.715	.857	3.431
	T_BR_PARTI(2)	.947	.365	6.738	1	.009	2.579	1.261	5.273
	T_LI_PERTRUSERV			10.636	2	.005			
	T_LI_PERTRUSERV(1)	1.043	.426	5.991	1	.014	2.838	1.231	6.543
	T_LI_PERTRUSERV(2)	.130	.479	.073	1	.787	1.138	.445	2.910
	T_LI_RELATIOSERV			5.261	2	.072			
	T_LI_RELATIOSERV(1)	1.133	.502	5.091	1	.024	3.105	1.160	8.309
	T_LI_RELATIOSERV(2)	1.096	.517	4.492	1	.034	2.993	1.086	8.250
	ernmnt10	.609	.191	10.150	1	.001	1.838	1.264	2.672
	recslr12	.333	.136	5.999	1	.014	1.395	1.069	1.821
	Constant	-6.226	.869	51.279	1	.000	.002		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 83: SC Components and Sex with CSWs (with sociodemographics)_ Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
Step 11[a]	T_BO_Differ			8.956	2	.011			
	T_BO_Differ(1)	.852	.286	8.865	1	.003	2.345	1.338	4.110
	T_BO_Differ(2)	.364	.289	1.581	1	.209	1.438	.816	2.535
	T_BO_PERTRUHELP			11.374	2	.003			
	T_BO_PERTRUHELP(1)	-1.184	.359	10.849	1	.001	.306	.151	.619
	T_BO_PERTRUHELP(2)	-.440	.250	3.094	1	.079	.644	.395	1.052
	T_BO_GENTRUHELP			29.015	2	.000			
	T_BO_GENTRUHELP(1)	1.210	.295	16.874	1	.000	3.354	1.883	5.976
	T_BO_GENTRUHELP(2)	-.320	.290	1.218	1	.270	.726	.412	1.282
	T_BR_GENTRUHELP			9.617	2	.008			
	T_BR_GENTRUHELP(1)	.641	.292	4.815	1	.028	1.899	1.071	3.368
	T_BR_GENTRUHELP(2)	-.177	.314	.317	1	.574	.838	.453	1.550
	T_BR_PARTI			5.834	2	.054			
	T_BR_PARTI(1)	-.041	.286	.020	1	.886	.960	.548	1.681
	T_BR_PARTI(2)	-.610	.279	4.784	1	.029	.543	.314	.939
	T_BR_TRUNEIGHBOR			8.386	2	.015			
	T_BR_TRUNEIGHBOR(1)	.115	.305	.142	1	.707	1.122	.617	2.041
	T_BR_TRUNEIGHBOR(2)	-.657	.298	4.861	1	.027	.518	.289	.930
	T_LI_ACCESSERV			7.125	2	.028			
	T_LI_ACCESSERV(1)	-.840	.315	7.116	1	.008	.432	.233	.800
	T_LI_ACCESSERV(2)	-.441	.293	2.275	1	.131	.643	.363	1.141
	T_LI_RELATIOSERV			10.825	2	.004			
	T_LI_RELATIOSERV(1)	-.967	.457	4.480	1	.034	.380	.155	.931
	T_LI_RELATIOSERV(2)	-.710	.244	8.478	1	.004	.492	.305	.793
	wife4	.884	.162	29.802	1	.000	2.422	1.763	3.327
	wrkdys9	1.020	.464	4.834	1	.028	2.773	1.117	6.884
	ernmnt10	.509	.194	6.882	1	.009	1.663	1.137	2.432
	incflt11(1)	.649	.245	7.006	1	.008	1.914	1.184	3.096
	recslr12	-.387	.175	4.894	1	.027	.679	.482	.957
	Constant	-7.011	1.523	21.191	1	.000	.001		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 84: SC Domains and No Condom use with CSWs_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 1	T_BO_Overall			6.524	2	.038			
	T_BO_Overall(1)	.468	.249	3.524	1	.060	1.597	.980	2.602
	T_BO_Overall(2)	-.114	.265	.186	1	.666	.892	.530	1.500
	T_BR_Overall			37.607	2	.000			
	T_BR_Overall(1)	1.373	.264	27.094	1	.000	3.948	2.354	6.621
	T_BR_Overall(2)	.159	.289	.302	1	.583	1.172	.665	2.064
	T_LI_Overall			30.208	2	.000			
	T_LI_Overall(1)	-1.530	.287	28.499	1	.000	.216	.123	.380
	T_LI_Overall(2)	-.280	.222	1.592	1	.207	.756	.489	1.168
	Constant	-2.785	.243	131.606	1	.000	.062		

Appendix 85: SC Domains and No Condom use with CSWs_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 3[a]	T_LI_Overall			5.244	2	.073			
	T_LI_Overall(1)	-.691	.525	1.731	1	.188	.501	.179	1.403
	T_LI_Overall(2)	.370	.487	.579	1	.447	1.448	.558	3.758
	Constant	-3.213	.385	69.475	1	.000	.040		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall.

Appendix 86: SC Domains and No Condom use with CSWs_Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 1	T_BO_Overall			14.778	2	.001			
	T_BO_Overall(1)	1.007	.299	11.308	1	.001	2.738	1.522	4.924
	T_BO_Overall(2)	.103	.319	.103	1	.748	1.108	.593	2.072
	T_BR_Overall			27.471	2	.000			
	T_BR_Overall(1)	1.555	.352	19.543	1	.000	4.736	2.377	9.439
	T_BR_Overall(2)	.258	.377	.470	1	.493	1.295	.619	2.708
	T_LI_Overall			13.764	2	.001			
	T_LI_Overall(1)	-1.351	.369	13.410	1	.000	.259	.126	.534
	T_LI_Overall(2)	-.569	.265	4.620	1	.032	.566	.337	.951
	Constant	-2.790	.306	82.942	1	.000	.061		

Appendix 87: SC Domains and No Condom use with CSWs (with sociodemographic)_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	T_BO_Overall			6.303	2	.043			
	T_BO_Overall(1)	.453	.264	2.943	1	.086	1.572	.938	2.637
	T_BO_Overall(2)	-.162	.276	.346	1	.556	.850	.495	1.461
	T_BR_Overall			33.845	2	.000			
	T_BR_Overall(1)	1.472	.286	26.388	1	.000	4.356	2.485	7.637
	T_BR_Overall(2)	.281	.299	.883	1	.347	1.324	.737	2.380
	T_LI_Overall			15.139	2	.001			
	T_LI_Overall(1)	-1.111	.307	13.136	1	.000	.329	.181	.600
	T_LI_Overall(2)	-.110	.235	.220	1	.639	.896	.565	1.419
	wife4	.386	.133	8.364	1	.004	1.471	1.132	1.910
	drnmgr5b	.408	.156	6.799	1	.009	1.504	1.107	2.043
	job8	.777	.130	35.975	1	.000	2.176	1.688	2.805
	wrkdys9	.776	.338	5.261	1	.022	2.172	1.120	4.215
	incflt11(1)	.911	.242	14.237	1	.000	2.488	1.550	3.994
	Constant	-9.510	1.262	56.762	1	.000	.000		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 88: SC Domains and No Condom use with CSWs (with sociodemographic)_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 13[a]	mart3(1)	-1.775	.741	5.739	1	.017	.169	.040	.724
	wrkdys9	1.109	.571	3.775	1	.052	3.033	.990	9.287
	recslr12	.451	.222	4.144	1	.042	1.570	1.017	2.424
	Constant	-7.498	1.599	21.986	1	.000	.001		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 89: SC Domains and No Condom use with CSWs (with sociodemographic)_Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 8[a]	T_BO_Overall			9.922	2	.007			
	T_BO_Overall(1)	.820	.327	6.279	1	.012	2.271	1.196	4.313
	T_BO_Overall(2)	-.049	.343	.020	1	.888	.953	.486	1.868
	T_BR_Overall			26.164	2	.000			
	T_BR_Overall(1)	1.832	.390	22.092	1	.000	6.247	2.910	13.410
	T_BR_Overall(2)	.619	.400	2.388	1	.122	1.857	.847	4.071
	T_LI_Overall			9.776	2	.008			
	T_LI_Overall(1)	-1.204	.393	9.403	1	.002	.300	.139	.648
	T_LI_Overall(2)	-.541	.284	3.616	1	.057	.582	.334	1.017
	wife4	.777	.176	19.493	1	.000	2.175	1.540	3.070
	drnmgr5b	.461	.198	5.436	1	.020	1.585	1.076	2.336
	job8	.529	.162	10.636	1	.001	1.698	1.235	2.334
	incflt11(1)	.938	.280	11.254	1	.001	2.556	1.477	4.421
	recslr12	-.554	.174	10.167	1	.001	.575	.409	.808
	Constant	-6.208	1.163	28.474	1	.000	.002		

a. Variable(s) entered on step 1: T_BO_Overall, T_BR_Overall, T_LI_Overall, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 90: SC Components and No Condom use with CSWs_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 4[a]	T_BO_PERTRUHELP			6.780	2	.034			
	T_BO_PERTRUHELP(1)	-.736	.297	6.128	1	.013	.479	.267	.858
	T_BO_PERTRUHELP(2)	-.429	.240	3.208	1	.073	.651	.407	1.041
	T_BO_COMMUSENSE			8.899	2	.012			
	T_BO_COMMUSENSE(1)	-.725	.290	6.236	1	.013	.484	.274	.856
	T_BO_COMMUSENSE(2)	.050	.240	.043	1	.836	1.051	.657	1.681
	T_BO_GENTRUHELP			31.637	2	.000			
	T_BO_GENTRUHELP(1)	.846	.253	11.176	1	.001	2.329	1.419	3.824
	T_BO_GENTRUHELP(2)	-.793	.331	5.747	1	.017	.452	.237	.865
	T_BR_GENTRUHELP			11.793	2	.003			
	T_BR_GENTRUHELP(1)	.787	.273	8.289	1	.004	2.197	1.286	3.753
	T_BR_GENTRUHELP(2)	.083	.290	.082	1	.774	1.087	.615	1.920
	T_BR_PARTI			8.739	2	.013			
	T_BR_PARTI(1)	.707	.265	7.108	1	.008	2.028	1.206	3.411
	T_BR_PARTI(2)	.154	.281	.301	1	.583	1.167	.672	2.026
	T_BR_TRUNEIGHBOR			7.209	2	.027			
	T_BR_TRUNEIGHBOR(1)	.727	.274	7.032	1	.008	2.070	1.209	3.544
	T_BR_TRUNEIGHBOR(2)	.372	.278	1.796	1	.180	1.451	.842	2.499
	T_LI_PARTI			6.772	2	.034			
	T_LI_PARTI(1)	-.620	.278	4.973	1	.026	.538	.312	.928
	T_LI_PARTI(2)	-.017	.252	.004	1	.948	.984	.600	1.612
	T_LI_RELATIOSERV			14.033	2	.001			
	T_LI_RELATIOSERV(1)	-1.142	.307	13.822	1	.000	.319	.175	.583
	T_LI_RELATIOSERV(2)	-.410	.233	3.098	1	.078	.664	.421	1.048
	Constant	-2.632	.339	60.353	1	.000	.072		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 91: SC Components and No Condom use with CSWs_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 11[a]	T_BO_Differ			7.828	2	.020			
	T_BO_Differ(1)	-.885	.467	3.595	1	.058	.413	.165	1.030
	T_BO_Differ(2)	-1.320	.524	6.348	1	.012	.267	.096	.746
	Constant	-2.730	.266	104.951	1	.000	.065		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 92: SC Components and No Condom use with CSWs_Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 7[a]	T_BO_Differ			21.916	2	.000			
	T_BO_Differ(1)	1.536	.338	20.611	1	.000	4.647	2.394	9.019
	T_BO_Differ(2)	.809	.373	4.722	1	.030	2.247	1.083	4.663
	T_BO_PERTRUHELP			10.743	2	.005			
	T_BO_PERTRUHELP(1)	-1.244	.383	10.552	1	.001	.288	.136	.610
	T_BO_PERTRUHELP(2)	-.414	.281	2.165	1	.141	.661	.381	1.147
	T_BO_GENTRUHELP			35.789	2	.000			
	T_BO_GENTRUHELP(1)	1.217	.312	15.188	1	.000	3.379	1.832	6.232
	T_BO_GENTRUHELP(2)	-.803	.397	4.100	1	.043	.448	.206	.975
	T_BR_GENTRUHELP			15.225	2	.000			
	T_BR_GENTRUHELP(1)	.921	.350	6.907	1	.009	2.512	1.264	4.991
	T_BR_GENTRUHELP(2)	-.195	.393	.248	1	.619	.822	.381	1.776
	T_LI_ACCESSERV			6.131	2	.047			
	T_LI_ACCESSERV(1)	.002	.334	.000	1	.995	1.002	.520	1.930
	T_LI_ACCESSERV(2)	.637	.320	3.967	1	.046	1.891	1.010	3.539
	Constant	-3.484	.428	66.331	1	.000	.031		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV.

Appendix 93: SC Components and No Condom use with CSWs (with sociodemographic)_Overall

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 13[a]	T_BO_PERTRUHELP			6.860	2	.032			
	T_BO_PERTRUHELP(1)	-.719	.296	5.888	1	.015	.487	.272	.871
	T_BO_PERTRUHELP(2)	-.480	.249	3.712	1	.054	.619	.380	1.008
	T_BO_GENTRUHELP			32.976	2	.000			
	T_BO_GENTRUHELP(1)	.809	.254	10.161	1	.001	2.247	1.366	3.696
	T_BO_GENTRUHELP(2)	-.932	.333	7.841	1	.005	.394	.205	.756
	T_BR_GENTRUHELP			8.377	2	.015			
	T_BR_GENTRUHELP(1)	.629	.279	5.071	1	.024	1.876	1.085	3.244
	T_BR_GENTRUHELP(2)	-.029	.295	.009	1	.923	.972	.545	1.734
	T_BR_PARTI			11.887	2	.003			
	T_BR_PARTI(1)	.889	.277	10.273	1	.001	2.432	1.412	4.189
	T_BR_PARTI(2)	.264	.292	.814	1	.367	1.302	.734	2.308
	T_BR_TRUNEIGHBOR			8.494	2	.014			
	T_BR_TRUNEIGHBOR(1)	.827	.286	8.349	1	.004	2.287	1.305	4.007
	T_BR_TRUNEIGHBOR(2)	.426	.284	2.246	1	.134	1.531	.877	2.673
	T_LI_PARTI			6.848	2	.033			
	T_LI_PARTI(1)	-.685	.284	5.815	1	.016	.504	.289	.880
	T_LI_PARTI(2)	-.111	.262	.181	1	.670	.895	.535	1.495
	T_LI_RELATIOSERV			6.647	2	.036			
	T_LI_RELATIOSERV(1)	-.783	.316	6.120	1	.013	.457	.246	.850
	T_LI_RELATIOSERV(2)	-.378	.240	2.484	1	.115	.685	.428	1.097
	wife4	.317	.131	5.821	1	.016	1.373	1.061	1.776
	job8	.687	.131	27.404	1	.000	1.987	1.537	2.570
	wrkdys9	.976	.345	7.996	1	.005	2.654	1.349	5.221
	incflt11(1)	.581	.251	5.350	1	.021	1.788	1.093	2.926
	Constant	-8.388	1.170	51.405	1	.000	.000		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 94: SC Components and No Condom use with CSWs (with sociodemographic)_Mumbai

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 21[a]	T_BO_Differ			6.820	2	.033			
	T_BO_Differ(1)	-.848	.473	3.214	1	.073	.428	.170	1.082
	T_BO_Differ(2)	-1.245	.531	5.508	1	.019	.288	.102	.814
	mart3(1)	-1.823	.742	6.037	1	.014	.162	.038	.692
	wrkdys9	1.343	.547	6.025	1	.014	3.832	1.311	11.201
	Constant	-6.091	1.595	14.577	1	.000	.002		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 95: SC Components and No Condom use with CSWs (with sociodemographic)_Ahmedabad

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 16[a]	T_BO_Differ			28.843	2	.000			
	T_BO_Differ(1)	1.904	.360	27.924	1	.000	6.714	3.313	13.605
	T_BO_Differ(2)	1.069	.386	7.648	1	.006	2.912	1.365	6.210
	T_BO_PERTRUHELP			9.606	2	.008			
	T_BO_PERTRUHELP(1)	-1.242	.406	9.340	1	.002	.289	.130	.641
	T_BO_PERTRUHELP(2)	-.449	.295	2.312	1	.128	.639	.358	1.138
	T_BO_GENTRUHELP			38.286	2	.000			
	T_BO_GENTRUHELP(1)	1.397	.323	18.657	1	.000	4.044	2.145	7.624
	T_BO_GENTRUHELP(2)	-.721	.405	3.180	1	.075	.486	.220	1.074
	T_BR_GENTRUHELP			14.034	2	.001			
	T_BR_GENTRUHELP(1)	.959	.369	6.759	1	.009	2.609	1.266	5.374
	T_BR_GENTRUHELP(2)	-.155	.409	.145	1	.704	.856	.384	1.907
	wife4	.916	.188	23.677	1	.000	2.498	1.728	3.613
	ernmnt10	.643	.226	8.086	1	.004	1.903	1.221	2.964
	incflt11(1)	.839	.297	7.984	1	.005	2.314	1.293	4.140
	recslr12	-.487	.181	7.257	1	.007	.614	.431	.876
	Constant	-6.672	1.137	34.439	1	.000	.001		

a. Variable(s) entered on step 1: T_BO_Differ, T_BO_PERTRUHELP, T_BO_COMMUSENSE, T_BO_GENTRUHELP, T_BR_GENTRUHELP, T_BR_PARTI, T_BR_TRUNEIGHBOR, T_LI_PERTRUSERV, T_LI_PARTI, T_LI_ACCESSERV, T_LI_RELATIOSERV, age1, edu2, mart3, wife4, drnmgr5b, lvgplc6, lvgcond7, job8, wrkdys9, ernmnt10, incflt11, recslr12.

Appendix 96: Survey Questionnaire

'Migration, Social Capital' and Vulnerability and Risk to HIV/AIDS Survey
(This is the final version after pilot-testing.)

Research Site: 1. Mumbai 2. Ahmedabad Questionnaire Code_ (1) Or (2)-001
(This will be printed in advance i.e. 1001 to 1800
Or 2001 to 2800)

Date of Interview: _____ _____ _____
(Day) (Month) (Year)
Name of Interviewer: _____
_____

A. SOCIODEMOGRAPHIC AND MIGRATION CHARACTERISTICS

Now, I am going to ask you questions, beginning with your date of birth/age

1 a) Birth date:_____ _____ _____
(Day) (Month) (Year)

1b) Respondent's self-reported age (approximate) _____

2) Educational Qualification: (Please circle one item only)

1. More than Matriculation
2. More than Primary but less than or equal to Matriculation
3. Less than Primary or Primary
4. Illiterate/Never attended a school

3) Present Marital Status: (Please circle one item only)

1. Currently Married **(Ask Q. No. 4 only if this is the answer)**
2. Separated
3. Divorced
4. Widowed
5. Unmarried / Never Married

4) Do you live here with your wife? (Please circle one item only)

1. With Wife
2. Without Wife
3. Currently without wife but my wife comes and stays with me sometime

5. a.) When did you migrate to this place: _____ _____
(Month) (Year)
b.) Respondent's self-reported duration of migration (approximate) _____

6) Is the place where you are living now your own or rented? (Please circle one item)

1. My own
2. Rented
3. Staying for free

7) In your opinion, what are your living conditions like? (Please circle one item only)

1. Very good
2. Good
3. Neither bad nor good
4. Bad
5. Very bad

8) Is your job of permanent nature or do you work on daily wage basis? (Please circle one item only)

1. Permanent or Regular job (such as in office, factory or shop)
2. On long contract (*theke pe*) basis
3. Daily wage earning (*dihad*i basis)

9) On average, how many days in a month do you work or get work? (Please circle one item only)

1. Less than 10 days
2. 10-20 days
3. 20-30 days

10) On average, how much do you earn in a month? (Please circle one item only)

1. Less than 3000
2. 3000 -5000
3. More than 5000

11) Do you earn the same amount every month or does your income fluctuate from month to month? (Please circle one item only)

1. Same every month
2. It fluctuates

12) How do you receive your salary/wage payment? (Please circle one item only)

1. Daily basis
2. Weekly basis
3. Job basis
4. Monthly
5. Lump sum on contract basis

13) Are you covered by any of the following social security schemes? (Please circle all that apply)

1. Life insurance
2. Medical insurance
3. Employers insurance
4. Other (specify)_____
5. None

14) In your opinion, what are your working conditions like? (Please circle one item)

1. Very good
2. Good
3. Fair
4. Harsh
5. Very harsh

15) How well do you speak the local language (Marathi in case of Mumbai and Gujarati in case of Ahmedabad)? (Please circle one item)

1. Fluently
2. Relatively Well
3. Workable
4. A few words
5. Not at all

16) In general, would you say that your health is: (Please circle one item)

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

17) In general, would you describe your life as: (Please circle one item)

1. Very stressful
2. Fairly stressful
3. Neither stressful nor without stress
4. Not very stressful
5. Not at all stressful

B. SOCIAL CAPITAL

18) Are you a member of any groups, organizations or associations?

1. Yes
2. No

If yes, what are the names of the groups/organizations to which you belong … what type of groups/organization is it, where is the group/organization located, and what is your level of participation in that group/organization.
(PROBE: Are there any other groups or informal associations that you belong to? Use code from below)

Name of Organization/Group	Type of Group/Organization (use codes from below)	Where the group, organizations located?	Level of Participation
[1] Social activity group (card playing group, weekly movie club) [2] Cultural association [3] Cultural / festival committee [4] Youth group [5] Sports group [6] Community welfare association [7] Water / waste Committee [8] Migrants' Welfare Association [9] Trade Union [10] Religious group [11] Neighborhood Association / Committee [12] Civic group (community welfare organization) [13] Credit and Saving Society [14] NGO [15] Health Committee/Organization [16] Political group [17] Other (Specify)_____		[1] Within Rajasthani community (Working mainly for own community interests) [2] If outside the community but within Kherwari or Piplaz area i.e. in host community, other migrants' community/ies [3] If it involves linkages with authorities (services. programs, government departments)	[1] Leader [2] Very Active member [3] Somewhat Active [4] Passive member

Note for researcher: ***Ask the Questions no.19 to 24 only to the people who have reported that they are member of some group/committee/organization. Fill only for one group, if the participant belongs to only one group.***

19) From the groups, organizations or associations you listed above, which 2 are the most important to you?
(List up to two groups by name and code type of organization from the previous question list)

Group 1: _____ [____] (code type of organization)

Group 2: _____ [____]

20) How many times in the past 12 months did you participate in the groups' activities e.g. by attending meetings or doing group work?

Group 1: _____ [____] (Write number of times)

Group 2: _____ [____]

21) How much money or goods (when expressed in terms of money) did you give to this group in the past 12 months?

Group 1: _____ [____] (money in rupees)

Group 2: _____ [____]

22) Does the group help you get access to any of the following services? (Please circle one item for each service per group)

Services	**Group 1 (circle one)**			**Group 2 (circle one)**		
	No	Yes, occasionally	Yes, frequently	No	Yes, occasionally	Yes, frequently
A. Training for job	1	2	3	1	2	3
B. Health services	1	2	3	1	2	3
C. Water supply or sanitation	1	2	3	1	2	3
D. Credit or savings	1	2	3	1	2	3
E. Job/ Information about jobs	1	2	3	1	2	3
F. Other (specify)	1	2	3	1	2	3

23). Now I'm going to ask you some questions about the groups' members. (Please circle one item for type of membership per group)

	Group 1			Group 2		
	No	Yes, occasionally	Yes, frequently	No	Yes, occasionally	Yes, frequently
a) Are they mostly of your extended family?	1	2	3	1	2	3
b) Are they mostly your neighbors?	1	2	3	1	2	3
c) Are members mostly from you caste?	1	2	3	1	2	3
d) Are members mostly of the same linguistic/ethnic background?	1	2	3	1	2	3
e) Are they mostly of the same religion as yours?	1	2	3	1	2	3
f) Are members mostly from your occupation?	1	2	3	1	2	3
g) Are members mostly of your age-group?	1	2	3	1	2	3
h) Are members of your level of education?	1	2	3	1	2	3
i) Do members have the same level of income as yours?	1	2	3	1	2	3

24). Now, please tell me about interaction of these groups with other groups. (Please circle one item for each interaction per group)

	Group 1			Group 2		
	No	Yes, occasionally	Yes, frequently	No	Yes, occasionally	Yes, frequently
a) Does this group work or interact with other groups *in* the Rajasthani community?	1	2	3	1	2	3
b) Does this group work or interact with other groups who are not Rajasthani but who are in the neighborhood?	1	2	3	1	2	3
c) Does this group work or interact with other groups in other migrant communities who are not Rajasthani?	1	2	3	1	2	3
d) Does this group work or interact with other government departments such as municipality, government clinic etc.	1	2	3	1	2	3
e) Does this group work or interact with NGOs?	1	2	3	1	2	3

For the following questions no. 25-27: ***Community*** *means Rajasthani community at the study location;* ***Neighborhood*** *means all the people and area at the study location i.e. Kherwari or Piplaz;* ***City*** *means the whole city i.e. Mumbai and Ahmedabad*

25) In every community some people get along with others and trust each others, while other people do not. Now, I would like to talk to you about trust and solidarity in your community. In general, do you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat or disagree strongly to the following statements?

	strongly agree	Agree	neither agree or disagree	Disagree	strongly disagree
A. Most people in this community can be trusted.	1	2	3	4	5
B. In this community, one has to be alert or someone is likely to take advantage of you.	1	2	3	4	5
C. Most people in this community are willing to help if you need it.	1	2	3	4	5
D. In this community, people generally do not trust each other in matters of lending and borrowing money.	1	2	3	4	5
E. People are only interested in their own welfare in this community	1	2	3	4	5

26). Now, I would like to talk to you about trust and solidarity in the whole neighborhood and with neighborhood, I mean the whole Kherwari / Piplaz area.

	strongly agree	Agree	neither agree or disagree	Disagree	strongly disagree
A. Most people in this neighborhood can be trusted.	1	2	3	4	5
B. In this neighborhood, one has to be alert or someone is likely to take advantage of you.	1	2	3	4	5
C. Most people in this neighborhood are willing to help if you need it.	1	2	3	4	5
D. In this neighborhood, people generally do not trust each other in matters of lending and borrowing money.	1	2	3	4	5
E. People are only interested in their own welfare	1	2	3	4	5
F. Generally speaking, if you lose your valuables in the neighborhood, someone will see it and return it to you.	1	2	3	4	5

27). Now, I would like to talk to you about trust and solidarity in the city and by city I mean, the whole city of Mumbai/Ahmedabad. **(Please circle one for each statement)**

	strongly agree	Agree	neither agree or disagree	Disagree	strongly disagree
A. Most people in the city can be trusted.	1	2	3	4	5
B. In this city, one has to be alert or someone is likely to take advantage of you.	1	2	3	4	5
C. Most people in this city are willing to help if you need it.	1	2	3	4	5
D. In this city, people generally do not trust each other in matters of lending and borrowing money.	1	2	3	4	5
E. People are only interested in their own welfare	1	2	3	4	5
F. Generally speaking, if you forget your valuables behind, someone will see it and return it to you.	1	2	3	4	5

28) Now I want to ask you how much you trust different types of people. For each of the following items, please indicate if you trust to a very small extent, to a small extent, neither small or great, to a great extent, or to a very great extent. (please circle one for each statement)

	To a very great extent	To a great Extent	Neither small not great	To a small extent	To a very small extent
A. People from your own Rajasthani community	1	2	3	4	5
B. People from other ethnic or linguistic groups such as other migrants from other areas	1	2	3	4	5
C. Local people from the city	1	2	3	4	5
D. Contractors/ employers / Supervisors	1	2	3	4	5
E. Shopkeepers	1	2	3	4	5
F. Local government officials such as municipality officials	1	2	3	4	5
G. Police	1	2	3	4	5
H. Government health departments or government hospital	1	2	3	4	5
I. Doctors	1	2	3	4	5
J. NGOs	1	2	3	4	5

29). Now I am going to read a few statements. Please let me know if you strongly agree, agree, neither agree or disagree, disagree, strongly disagree.
(Please circle one for each statement)

	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
A) In the city I only interact with people from my community	1	2	3	4	5
B) I have friends in other migrant and host communities with whom I communicate on a regular basis	1	2	3	4	5
C) Banks lend money to business people in our community (e.g., contractors, shopkeepers etc.)	1	2	3	4	5
D) Hospital/nursing station/health centre authorities listen to people in our community	1	2	3	4	5

30) About how many close friends do you have these days? These are the people you feel at ease with, can talk to about private matters, or can call for help.
_____ (Number of close friends)

31) Who are these friends? ***(Circle all that apply)***

1. People you live with in your place of living
2. Your neighbors / Members of your own Rajasthani community
3. People from the host community in your neighborhood (i.e. Kherwari or Piplaz)
4. People you work with
5. People from government departments, NGOs, municipality or political parties

32) If you suddenly needed a small amount of money, say equal to one weeks' wages, how many people could you turn to who would be willing to provide this money to you?
(Please circle one only)

1. No one
2. 1or 2 people
3. 3 or 4 people
4. 5 or more

33) If you suddenly had to go away for a day or two, could you count on your neighbors or people you share house with to take care of your belongings? (please circle one only)
1. Definitely
2. Probably
3. I am not sure
4. Probably not
5. Definitely not

34) Now I'm going to ask you a series of questions on people or groups you may approach for help if you were in need of some kind of support.

a) To members of your own Rajasthani community ***(Please circle one)***

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

b) To members of the in the Kherwari/Piplaz area who are not Rajasthani ***(Please circle one)***

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

c) To members of the migrant community from other states ***(Please circle one)***

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

d) To employers/contractors ***(Please circle one)***

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

e) To government authorities, municipality and government departments and services etc. ***(Please circle one)***

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

35) Since the time you have been here, do you think the level of trust in your community / neighborhood has gotten better, worse, or stayed the same? (*(Please circle one)*

1. Gotten better
2. Gotten worse
3. Stayed the same

36) If a community project does not directly benefit you, but has benefit for many others in the community, would you contribute to the project? *(Please circle one)*

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

37) Suppose there is a flood in the community, how likely is that you will contribute to solve the problem? *(Please circle one)*

1. Very likely
2. Somewhat likely
3. Neither likely nor unlikely
4. Somewhat unlikely
5. Very unlikely

38) There are often differences that exist between people living in the same community / neighborhood. (Circle one item for each statement)

	Not at all	Somewhat	Very much
Differences in education	1	2	3
Differences in wealth/material possessions	1	2	3
Differences in social status	1	2	3
Differences between younger and older generations	1	2	3
Difference between old migrants and new migrants	1	2	3
Difference in political party affiliations	1	2	3
Differences in religious beliefs	1	2	3
Differences in caste background	1	2	3

39) Do these differences cause problems? (Please circle one item)
1. Differences do not cause problems
2. Differences cause problems

Ask this question only if the response to question no. 39 is 2.

40) What kinds of problems do the differences cause?

A. Within community competition for jobs
1. Not at all
2. Somewhat
3. Very much

B. Not sharing information about jobs
A. Not at all
B. Somewhat
C. Very much

C. Differences weaken the feeling of cooperation among the members of the community

1. Not at all
2. Somewhat
3. Very much

D. Discrimination against community members with differences

1. Not at all
2. Somewhat
3. Very much

E. Exclusion of certain members from community affairs (such as cultural festivals, community consultations)

1. Not at all
2. Somewhat
3. Very much

F. Differences lead to feeling of animosity/disaffection among members of the community

1. Not at all
2. Somewhat
3. Very much

41) Do you have access to the following services?

	Yes, always	Yes, Sometimes	No, never	Services not available
Health services/clinics	1	2	3	9
Water and sanitation services	1	2	3	9
Job training/employment	1	2	3	9
Credit/finance	1	2	3	9
Justice/conflict resolution	1	2	3	9
STI/HIV Services (Information, counseling and treatment)	1	2	3	9

42) How do you rate your experience with government services in your community? (Please circle one item)

1. Very good
2. Good
3. Fair / Average
4. Bad
5. Very bad

43) In the last two years have you personally done any of the following things? (Circle the code for each statement)

	Yes always,	Sometime	Never
(a) Voted in the elections	1	2	3
(b) Actively participated in an association	1	2	3
(c) Made a personal contact with an influential person	1	2	3
(d) Contacted newspapers, radio and TV to cover some problem in your community	1	2	3
(e) Actively participated in an information campaign for migrants' welfare	1	2	3
(f) Actively participated in an election campaign	1	2	3
(g) Contacted your elected representative	1	2	3
(h) Taken part in a sit-in or *dharna*	1	2	3
(i) Made a donation of money or in-kind	1	2	3
(j) Volunteered for a charitable/community organization	1	2	3

44) In general, how happy do you consider yourself to be? (please circle one item)

1. Very happy
2. Moderately happy
3. Neither happy or unhappy
4. Moderately unhappy
5. Very unhappy

45) How much control do you feel you have in making decisions that affect your everyday activities? (Please circle one item)

1. No control
2. Control over very few decisions
3. Control over some decisions
4. Control over most decisions
5. Control over all decisions

46) How often do you travel back to your village in a year?

------- (Write actual number of times in a year)

47) What was your occupation in your village?

(a) (Give actual name)_____

(b) **If yes, was your job? (Please circle all that apply)**

1. Permanent or Regular job (such as in office, factory or shop)
2. On long contract (*theke pe*) basis
3. Daily wage earning (*dihad*i basis)
4. Self-employed
5. Worked on my own land
6. Unemployed

Now I am going to ask a few questions where I will ask you to compare your life in your village with your life in city.

48) In your opinion, how were the living conditions in your village when you compare them to the living conditions here in city? (Please circle one item)

1. Much better
2. Better
3. More or less similar
4. Worse
5. Much worse

49) In your opinion, how are the working conditions in the city when you compare them to the working conditions in your village? (Please circle one item)

1. Much better
2. Better
3. More or less similar
4. Worse
5. Much worse

50) Do you have a lot more, more, more or less similar, less or a lot less number of friends in your village than here in the city?

1. A lot more
2. More
3. More or less similar
4. Less
5. A lot less

51) Compared to here in city, how will you rate your involvement and participation in community activities in the village (such as attending group meetings, doing community work)? (Please circle one item)

1. A lot more
2. More
3. More or less similar
4. Less
5. A lot less

52) Compared to people in the city, how would you rate the level of trust among the people in village? (Please circle one item)

1. A lot more
2. More
3. More or less similar
4. Less
5. A lot less

53) In your village, if you suddenly needed a small amount of money, say equal to one weeks' wages, how many people could you turn to who would be willing to provide this money to you? (Please circle one item)

1. No one
2. 1or 2 people
3. 3 or 4 people
4. 5 or more

54) Suppose you are in need of some help (for example you had an accident or become ill), will you get a lot more, more, more or less same, less or a lot less support and care in your village as compared to the support and care you get here in the city? (Please circle one item)

1. A lot more
2. More
3. More or less similar
4. Less
5. A lot less

55) Suppose there is a flood in the village, how likely is it that people will cooperate to try to solve the problem? (Please circle one item)

1. Very likely
2. Somewhat likely
3. Neither likely nor unlikely
4. Somewhat unlikely
5. Very unlikely

56) How would you rate the degree of cooperation for solving a community problem in the village as compared to the city? (Please circle one item)

1. A lot more
2. More
3. More or less similar
4. Less
5. A lot less

57) Do you have access to the following services in your village? (Please circle one item per statement)

	Yes, always	Yes, Sometimes	No, never	Services not available
Health services/clinics	1	2	3	9
Water and sanitation services	1	2	3	9
Job training/employment	1	2	3	9
Credit/finance	1	2	3	9
Justice/conflict resolution	1	2	3	9
STI/HIV Services (Information, counseling and treatment)	1	2	3	9

58) How would you rate the access to services in your village as compared to the access to services here in the city? (Please circle one item)

1. A lot better
2. Better
3. More or less similar
4. Worse
5. A lot worse

59) As compared to the village, do you feel a lot more, more, more or less same, less, a lot less happy here in the city? (Please circle one item)

1. A lot more
2. More
3. More or less similar
4. Less
5. A lot less

60) As compared to the village, do you think you have a lot more, more, more or less same, less, a lot less control in making decisions that affect your everyday activities? (Please circle one item)

1. A lot more
2. More
3. More or less similar
4. Less
5. A lot less

61) Compared to your health in your village, how do you rate your health here in city? (Please circle one item)

1. Much better
2. Better
3. More or less same
4. Worse
5. Much worse

Now, I am going to ask you some questions which are personal and intimate in nature. May I also restate that all the responses you give will be completely confidential!

62) Different activities:

Entertainment activity	Place of Origin (home village)			Destination Place (city)		
	Regularly	Occasionally	Never	Regularly	Occasionally	Never
Watch television/listen to radio/folk performances	1	2	3	1	2	3
Spend time with friends on *nukkads*	1	2	3	1	2	3
Roam around in the village / community neighborhood	1	2	3	1	2	3
Playing cards/other group games	1	2	3	1	2	3
Drink alcohol	1	2	3	1	2	3
Taking drugs	1	2	3	1	2	3
Injecting drugs	1	2	3	1	2	3
None	1	2	3	1	2	3

63) Have you ever had sex?

1. Yes
2. No **(if no, then skip to question no. 68)**

64) Age at first sexual encounter_____ (Write the self reported age in years)

65) Sexual partner at first sexual encounter: (Please circle one item only)

1. Friend/lover/relative
2. Neighbor or from the same village
3. Commercial sex worker
4. Wife

66) Place of first sexual encounter **(Please circle one only)**

1. In the village before migration
2. In the village after migration
3. In nearby town before migration
4. In nearby town after migration
5. At the place of destination (in this city)

67) Current number of sexual partners? (Include spouse if married)

1. 1 partner
2. 2 partners
3. More than 2 but less than 5 partners
4. 5 or more partners

68) (a) Do you have sexual urges when you are here in the city?

1. Yes **(If the answer is yes, ask Q. No. 68 (b))**
2. No

68) (b) What do you do to satisfy your sexual urges? (Please circle all that apply)

1. Masturbation
2. Have sex with female friend
3. Have se x with male friend
4. Have sex with female co-worker/s
5. Have sex with a commercial sex worker
6. Control my urges

69) Have you heard of condoms? (Please circle one only)

1. Yes
2. No

70) How often do you use a condom? (Please circle one only)

1. Regularly
2. Sometimes
3. Never

71) Have you used a condom in last twelve months? (Please circle one only)

1. Yes
2. No

72) Did you use condom in your last sexual act? (Please circle one only)

1. Yes
2. No

73) Do you use condom with your spouse or regular partner? (Please circle one only)

1. Always
2. Sometimes
3. Rarely
4. Never

74) How many other casual partners (Mistresses, casual partners, commercial sex workers, male friend/partner, others) did you have had in the last 12 months? (Please circle one only)
1. One
2. Two
3. More than 2 but less than 5
4. 5 or more than 5
5. 0

75) Have you had sex with a commercial sex worker in the destination place (i.e. here in the city) in the last 12 months?

1. Yes
2. No

If yes, then ask Q. No. 76 & 77:

76) How often

1. Once or twice a year
2. Once a month on average
3. Once a week on average
4. Almost every day

77) How often do you use condom with this partner?

1. Always
2. Most of the times
3. Sometimes
4. Never

78) Have you ever had sex with a commercial sex worker in your home village?

1. Yes
2. No

If yes, then ask Q. No. 79 & 80:

79) How often

1. Once or twice a year
2. Once a month on average
3. Once a week on average
4. Almost every day

80) How often do you use condom with this partner?
1. Always
2. Most of the times
3. Sometimes
4. Never

81) Have you ever had sex with a male friend/partner?

1. Yes
2. No

If yes, then ask Q. No. 82 & 83:

82) How often

1. Once or twice a year
2. Once a month on average
3. Once a week on average
4. Almost every day

83) How often do you use condom with this partner?

1. Always
2. Most of the times
3. Sometimes
4. Never

84) Have you heard of Sexually transmitted diseases (STDs)? (Please circle one item)
1. Yes
2. No

85) Please tell me at least two symptoms of STDs--- [1] or [2]

(To circle 1 if two symptoms are told and 2 if less than two correct symptoms are told).

(Ex. 1. Swelling of scrotum; 2. Swelling in the groin; 3. Ulcer in the genital region/surrounding areas; 4. Blisters in the genital region; 5. Pus discharge from the genitals; 6. Pain or burning while passing urine)

86) Please tell me at least two ways you can prevent STDs--- [1] or [2]

(To circle 1 if two methods are told and 2 if less than two correct methods are told).

(Correct methods: 1. Abstinence; 2. Use condoms; 3. Be faithful to only one sex partner; 4. Reduce the number of sexual partners; 5. Have only non-penetrative sex; 6. Getting the STD treated immediately etc.)

87) Are all sexually transmitted diseases curable?
1. Yes,
2. No,
3. Don't know

88) Have you heard of HIV/AIDS?
1. Yes
2. No

89) Is HIV/AIDS curable?
1. Yes
2. No
3. Don't know

90) Please tell me two methods to prevent HIV ---------- [1] or [2]

(To circle 1 if two correct methods are told and 2 if less than two correct methods are told).

(Correct methods: 1. Abstinence; 2. Use of condom; 3. Using unused/disinfected needles; 4. Be faithful to only one sex partner; 5. Avoid sharing needles etc.)

91) Have you ever had symptoms of STD?

1 Yes
2. No
3. Don't know

If Yes, then ask Q. No. 92

92) From where did you seek treatment? **(Circle all that apply)**

1. Did not take any treatment
2. Self and home based medication
3. Asked friends about medicine
4. Took the medicine directly from the medical shop
5. Showed to a private doctor
6. From the Government Clinic/Hospital

93) Do you think you are at risk of STDs? (Circle one item only)
1. Yes
2. No
3. Can't say (Meaning I am not sure)
4. Don't Know

94) Do you think you are at risk of HIV? (Circle one item only)
1. Yes
2. No
3. Can't say (Meaning I am not sure)
4. Don't Know

95) Is there any government funded or government run organization or program in your area or community to spread awareness on STDs and HIV/AIDS?
1. Yes
2. No
3. Don't know

96) Did you ever receive information from this organization or program?

1. Yes
2. No

97) Is there any government funded or government run organization or program in your area or community for treatment of STDs?

1. Yes
2. No
3. Don't know

98) Did you ever access this service?

1. Yes
2. No

99) In your opinion, what are some of the reasons which play role in looking for or having sex partners at the destination place (here in the city)?

(I am going to read few statements. Please tell me whether they are a reason in your opinion you agree strongly, agree, neither agree nor disagree, disagree, disagree strongly)

	Agree strongly	agree	neither agree nor disagree	Disagree	Disagree strongly
A. Away from wife/ regular sexual partner	1	2	3	4	5
B. City ensuring anonymity/sense of freedom	1	2	3	4	5
C. Alcohol consumption	1	2	3	4	5
D. Nothing else to do in the evenings or lack of opportunities and avenues of social engagement and entertainment	1	2	3	4	5
E. Loneliness	1	2	3	4	5
F. Peer Pressure	1	2	3	4	5
G. It is in man's nature to have sex regularly	1	2	3	4	5
H. Having many partners is the sign of being virile/manliness	1	2	3	4	5
I. Variation in disposable income	1	2	3	4	5
J. To forget stress, hardships	1	2	3	4	5
H. Easy availability of sex in the city	1	2	3	4	5

This concludes our list of questions. Thank you very much for your co-operation.
Start time: _____
End time: _____ Date: _____

Appendix 97: Qualitative Fieldwork Instruments

A. Focus Group Discussion Guide

Section A: Sociodemographic and Migration Characteristics

In the beginning the participants will be asked to have a discussion on the general theme of main characteristics of their community. This section will correspond to the first section in the survey instrument i.e. sociodemographic and migration characteristics. Within that theme, focus will be on the followings:

Community Profile:

1. How do you define this community and neighborhood?
[*Probe on geographical boundaries, place names, and other reference points*]

2. Where is/are the…
- Health services (both formal and informal)?
- Sources of water? Potable water or tap or wells? Quality of water in the community?
- Waste and garbage disposal? Sewage system?
- Do the streets of the community have sewers and drains to handle excess water and prevent flooding when it rains?
- Sources of electric lighting?
- Public telephones? Personal telephones?
- Public lighting?
- Main access to community (streets/roads)? Principle means of transportation?
- Markets, shops and other commercial establishments?
- Temples (houses of worship)?
- Cultural and recreational areas? (Where do they spend their free time?)
- What buildings do the community members use most frequently for meetings and gatherings? (personal homes/home of community leaders/religious places/health centres/government building/other (specify))

3. How many years has this neighborhood been in existence? Has the neighborhood grown, gotten smaller or stayed the same in the last five years? Who are the people most likely to come in to or leave the community?
- Who makes the majority in the community?
- What are their socio-economic and occupational backgrounds?
- What are the 3 principal illnesses or diseases in the community?
- Does the community have a health clinic or hospital?
- Is the health service public or private?

People Profile:
- What is the age profile of the community members?
- Do duration of stay at the destination place, marital status and age inform their living and working conditions?
- What are the main occupations of the community members?
- How are the job opportunities? Have they increased or decreased in recent years?
- Who are the people who face difficulties in findings regular work?
- Are there skill building/training program in the community? If yes, are they run by community, government or private organizations?

Section B: Social Capital

This section will cover themes under social capital i.e. various forms of collective action, the actual and potential resources in the community. The themes will be broken into sub-themes as followings:

1. Community groups, organizations and networks

Main Theme:

What are the groups, organizations or associations that function in this neighborhood?

(Elicit a list of all the organizations, formal and informal, that exist in the community (credit, religious, recreational, health, education, etc.).

Sub-themes:

1. Which groups play the most active role in helping improve the wellbeing of community members?
2. How did this group or organization get started (government initiated; through government donations; NGO donations; grassroots initiative etc)?
3. How the leaders are selected (election; appointment; inheritance)? How stable is the leadership (frequent or sudden changes, normal progressive change, or never changes)? Is leadership generally harmonious or conflictive?
4. How are decisions made within these groups or organizations?
5. Are there any organizations that work against each other (compete or have some sort of conflict)? If yes, which one and why?

2. Collective action, solidarity, conflict resolution, and sustainability of efforts

Main Theme:

People from the same community/neighborhood often get together to address a particular issue that faces the community, to fix a problem or to improve the quality of life or something similar. So, the discussion will be on the nature of collective action and desired objective of that collective action in last two years (interjections will be to probe on various issues such as skill building/training, education, health, public services, roads and transportation, credit, recreational and cultural resources, security).

Sub-themes:

1. Have there been any efforts by the community to improve the quality of the any service or overcome a problem? Can you describe one instance in detail?

(Refer to this case study for specifics of the following questions.)

- Were there community groups that played an important role?
- What kinds of responses did you get from the local government? From other organizations? From the rest of the community?
- What kinds of obstacles did you have to deal with?
- What was the outcome of the effort?

(Focus the discussion to get information on locus of leadership, resources tapped, sources of resistance, who benefited or suffered from the outcome, what kind of follow-up occurred as a result of the effort, and what mechanisms were employed to assure sustainability of the effort.)

2. Has this neighborhood ever attempted to make improvements but failed? Why do you think it failed? What you think should have been done to make the effort more successful? (Focus the discussion to have information on constraints on collective action, identify the roles of government, community organizations and secondary institutions in influencing outcomes, and discuss the relationship between the community, representative organizations, local government, and other civil society actors.)

3. Community governance and decision making
Main theme:
The discussion will broadly centre around the informal and formal leadership structure and what is the nature of social system of control and sanctions.

Sub-themes:
1. Who are the main leaders in this community?
(Probe re: formal and informal leadership.)
2. How do they become leaders? How are new leaders selected?
3. How are decisions made within this community? What is the role of the community leaders? How are community members involved?
(Probe on role of traditional leaders, informal leaders, elites)
4. Do all members obey the community rules and norms? What is done in case some member/s don't follow what the leaders say or flout the community norms?

4. Relationship with other migrant communities and with host community
Main Theme:
The nature and level of social interaction of Rajasthani migrant community with other migrant communities, and also with host community

Sub-themes:
The sub-themes will focus on whether there is a relationship or not with both other migrant communities and with host communities.
1. If yes, then the discussion will identify
- level and nature of relationship (e.g. whether the relationship is at community level or individual level where certain individuals have friends in other communities or part of groups in other communities;
- whether the relationship is cultural (i.e. celebrating festivals together) or political (i.e. have formed trade union or workers' interest group to save and promote the workers interests);

2. If not, then what are the reasons for not having social relations with other migrant communities and with host community?

5. Services, institutions and access issues
Main theme:
This will correspond to what we call linking social capital and the discussion will focus on issues of existing services in the community and access to those services.

Sub-themes:
1. Rank the extra-community groups/organizations/institutions as per the roles played by each in meeting the needs of the community members?
- How accessible these groups/organizations are to community members?

2. Do the community organizations and these extra-community organizations work together? How do they work together (hierarchically, collaboratively)?

3. Do you think that everyone in this village/neighborhood has equal access to different services such as jobs, health services etc.
- Is this also true for the poorest members of the community?
- Does duration of stay in the city affect the access to services; if yes, how and why?

Section C: Vulnerability and Risk Scenario

This section will correspond to the third section in the survey instrument and the discussion will be geared towards generating a vulnerability and risk profile of members in the community.

Main theme:

Vulnerability of the community to sexual health risks and prevalence of high risk behaviour
(Overall sexual behaviour, sexual partners, availability of sex work, sexual practices and attitudes; sexual health services - availability and accessibility)

Sub-themes:

1. How prevalent are sexually transmitted diseases in the community?
2. How is the sexual behaviour of the community? Do people have casual partners? Do community members visit sex workers? Do they use condom?
3. What are the factors behind high risk behaviour?
(Probe re: away from wife and family; alcohol consumption; peer pressure; loneliness etc.)
4. Services for sexual health (information services; counseling services; treatment services)
5. How prevalent is HIV in the community?
6. What the group thinks is the most important factor behind migrants' vulnerability and risk to HIV?
7. What the group thinks can be and should be done to reduce migrants' vulnerability and risk to HIV?

B. Key-informant In-depth Interview

Section A: Sociodemographic and Migration Characteristics

In the beginning the key-informant will be asked share his knowledge and views on the main characteristics of the community. This section will correspond to the first section in the survey instrument and Focus Group Discussion guide i.e. sociodemographic and migration characteristics. Within the broader theme, the focus will be on the followings:

Community Profile:

1. How do you define this community and neighborhood?
[*Probe on geographical boundaries, place names, and other reference points*]

2. Where is/are the…
- Health services (both formal and informal)?
- Sources of water? Potable water or tap or wells? Quality of water in the community?
- Waste and garbage disposal? Sewage system?
- Do the streets of the community have sewers and drains to handle excess water and prevent flooding when it rains?
- Sources of electric lighting?
- Public telephones? Personal telephones?
- Public lighting?
- Main access to community (streets/roads)?
- Temples (houses of worship)?
- Cultural and recreational areas? (Where do they spend their free time?)
- Buildings for community meetings and gatherings? (personal homes/home of community leaders/religious places/health centres/government building/other (specify))

3. Community life over the years: How many years has this neighborhood been in existence? Has the neighborhood grown, gotten smaller or stayed the same in the last five years? Who are the people most likely to come in to or leave the community?

- Who makes the majority in the community?
- What are their socio-economic and occupational backgrounds?
- What are the 3 principal illnesses or diseases in the community?
- Does the community have a health clinic or hospital?
- Is the health service public or private?
- What are the two principal problems or needs that community feels must be addressed and/or solved?

4. People Profile:

- What is the age profile of the community members?
- Do duration of stay at the destination place, marital status and age inform their living and working conditions?
- What are the main occupations of the community members?
- How are the job opportunities? Have they increased or decreased in recent years?
- Who are the people who face difficulties in findings regular work?
- Are there skill building/training program in the community? If yes, are they run by community, government or private organizations?

Section B: Social Capital

This section will cover themes under social capital i.e. various forms of collective action and group dynamics to reflect on the actual and potential resources the community has. The themes will be broken into sub-themes as followings:

1. Community groups, organizations and networks

Main Theme:

What are the groups, organizations or associations that function in this neighborhood?

(Elicit a list of all the organizations, formal and informal, that exist in the community (credit, religious, recreational, health, education, etc.).

Sub-themes:

1. Which groups play the most active role in helping improve the wellbeing of community members?
2. How did this group or organization get started (government initiated; through government donations; NGO donations; grassroots initiative; etc)?
3. How the leaders are selected (election; appointment; inheritance)? How stable is the leadership (frequent or sudden changes, normal progressive change, or never changes)? Is leadership generally harmonious or conflictive?
4. How are the decisions made within these groups or organizations?
5. Are there any organizations that work against each other (compete or have some sort of conflict)? If yes, which one and why?

2. Collective action, solidarity, conflict resolution, and sustainability of efforts

Main Theme:

The discussion will be to find about level of collective action in the community to achieve some common desired outcome.

Sub-themes:

1. Have there been any efforts by the community to improve the quality of the any service or overcome a problem? Can you describe one instance in detail?

(Refer to this case study for specifics of the following questions.)
- Were there community groups that played an important role?
- What kinds of responses did you get from the local government? From other organizations? From the rest of the community?
- What kinds of obstacles did you have to deal with?
- What was the outcome of the effort?

(Focus the discussion to get information on locus of leadership, resources tapped, sources of resistance, who benefited or suffered from the outcome, what kind of follow-up occurred as a result of the effort, and what mechanisms were employed to assure sustainability of the effort.)

2. Has this neighborhood ever attempted to make improvements but failed? Why do you think it failed? What you think should have been done to make the effort more successful? (Focus the discussion to have information on constraints on collective action, identify the roles of government, community organizations and secondary institutions in influencing outcomes, and discuss the relationship between the community, representative organizations, local government, and other civil society actors.)

3. Community governance and decision making
Main theme:
The discussion will broadly centre around the informal and formal leadership structure and what is the nature of social system of control and sanctions.

Sub-themes:
1. Who are the main leaders in this community? (formal and informal leadership.)
2. How do they become leaders? How are new leaders selected?
3. How are decisions made within this community? What is the role of the community leaders? How are community members involved?
   (Probe on role of traditional leaders, informal leaders, elites)
4. Do all members obey the community rules and norms? What is done in case some member/s doesn't follow what the leaders say or flout the community norms?

4. Relationship with other migrant communities and with host community
Main Theme:
The nature and level of social interaction of Rajasthani migrant community with other migrant communities, and also with host community

Sub-themes:
The sub-themes will focus on whether there is a relationship or not with both other migrant communities and with host communities.
1. If yes, then the discussion will identify
- level and nature of relationship (e.g. whether the relationship is at community level or individual level where certain individuals have friends in other communities or part of groups in other communities;
- whether the relationship is cultural (i.e. celebrating festivals together) or political (i.e. have formed trade union or workers' interest group to save and promote the workers interests);

2. If not, then what are the reasons for not having social relations with other migrant communities and with host community?

5. Services, institutions and access issues
Main theme:

This will correspond to what we call linking social capital and the discussion will focus on issues of existing services in the community and access to those services.

Sub-themes:

1. Rank the extra-community groups/organizations/institutions/services as per the roles played by each in meeting the needs of the community members?
   - How accessible these groups/organizations are to community members?
2. Do the community organizations and these extra-community organizations work together? How do they work together (hierarchically, collaboratively)?
3. Do you think that everyone in this village/neighborhood has equal access to different services such as jobs, health services etc.
   - Is this also true for the poorest members of the community?
   - Does duration of stay in the city affect the access to services; if yes, how and why?
   - Does caste play any role?
   - What do you think is the most important factor which decides whether members from your community will get the services or not?

Section C: Vulnerability and Risk Scenario

This section will correspond to the third section in the survey instrument and the Focus Group Discussion Guide and will be geared towards generating a vulnerability and risk profile of members in the community.

Main theme:

Vulnerability of the community to sexual health risks and prevalence of high risk behaviour
(Overall sexual behaviour, sexual partners, availability of sex work, sexual practices and attitudes; sexual health services - availability and accessibility)

Sub-themes:

1. How prevalent are sexually transmitted diseases in the community?
2. How is the sexual behaviour of the community? Do people have casual partners? Do community members visit sex workers? Do they use condom?
3. What are the factors behind high risk behaviour?
(Probe re: away from wife and family; alcohol consumption; peer pressure; loneliness etc.)
4. Services for sexual health (information services; counseling services; treatment services)
5. How prevalent is HIV in the community?
6. What in your opinion is the most important factors behind migrants' high risk behaviour?
7. What in your view can be and should be done to reduce the migrants' vulnerability and risk to HIV