Chapter 19
Substance Abuse and HIV in China
The Impact of Residence and Residential Mobility
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Abstract Using data from a population-based survey conducted in 2003 and employing multilevel modeling, the chapter examines the impact of residential characteristics and mobility on substance abuse and HIV in China. Both individual characteristics and contextual factors are hypothesized to affect individual drug-using behavior and HIV infection. The results suggest that being migrant is associated with significantly less risky drug-using behavior and lower odds of HIV infection. Drug use is also significantly associated with being male, less educated, single, and psychosocial well-being. At the contextual level, drug use is significantly and negatively associated with poverty. HIV infection is significantly correlated with prevalence of drug use in the community. For both drug use and HIV infection, there are significant cross-community variances in the random intercept component, suggesting that the likelihood of substance abuse and HIV infection vary significantly across geographic locations. HIV research and behavioral intervention need to pay particular attention to contextual characteristics.

Introduction
With 650,000 people officially estimated to be living with HIV/AIDS by 2005, AIDS has evolved within two decades from an unheard of disease to an epidemic affecting every population group and geographic location in China (China Ministry of Health, UNAIDS, and WHO 2006). However, significant differences exist in prevalence of HIV across geographic locations (Gong and Shao 2001; Zheng 2001). Although sexual transmission of HIV accounted for 49.8% of new infections in China in 2005, surpassing for the first time that attributable to drug-related transmission (48.6%), drug abuse remains a key source of new HIV infections in the country. In 2004, there were more than one million officially registered drug users in China, of whom more than 75% were active heroin addicts (Tang, Zhao, Zhao, and Cubells 2006). Despite likely
serious underreporting, the official statistics make it clear that drug abuse is widespread but varies significantly across geographic locations and different population groups in contemporary China (Fang, Wang, Shi, Liu, and Lu 2006).

While causes of drug abuse and spread of HIV are likely to be complex and multifaceted, increasing migration has been portrayed by the media and implicated in the literature as one of the main catalyst. In fact, residential immobility is arguably the key to understanding the absence of drugs, crimes, and commercial sex in pre-reform China (Situ and Liu 1996; Troyer, Clark, and Rojek 1989). Although varied by sources, temporary migrant population, which constitutes the majority of rural–urban migrants in contemporary China, was estimated to have grown from 11 million in 1982 to 79 million in 2000 (Liang and Ma 2004), and estimated 120 million currently (China Ministry of Health et al. 2006). The uprooting and on the move of so many migrant people may create conditions that are conducive to behavioral change and disease transmission. The quick spread of drugs and HIV in China needs to be understood in the context of social and economic changes associated with increasing migration in the country (Smith and Yang 2005; Weniger and Berkley 1996).

Much has been written about the economic causes and consequences of migration. Less studied is the impact of migration on substance abuse and HIV in China. Further, the significant spatial difference in prevalence of both drug abuse and HIV underscores the importance of contextual factors in understanding drug-using behavior and HIV infection. Yet, research on drug abuse and HIV in China has paid little attention to contextual factors that may be conducive to the spread of drugs and consequently HIV. This chapter focuses on the impact of migration and residential contexts on drug abuse and HIV infection. The central hypothesis is that the process of migration renders migrants vulnerable to substance abuse and consequently HIV infection and that causes of drug-using behavior and HIV infection go beyond individual level correlates to also include contextual factors at the residential community level. The results will help better understand the impacts of migration on substance abuse and HIV infection and the contextual underpinnings of individual drug-using behaviors and HIV infection. They may also provide important empirical evidence for the design of behavioral or policy intervention programs that target both individuals and social and residential contexts.

Migration, Drugs, and HIV

Studies in China (Anderson, Qingsi, Hua, and Jianfeng 2003; Li et al. 2004; Smith and Yang 2005) and elsewhere (Hunt 1989; Lansky et al. 2000; Organista and Organista 1997; Skeldon 2000; UNAIDS 2001) have repeatedly identified migration as an important factor leading to the spread of HIV/STDs. From an epidemiological point of view, the spread of infectious diseases such as HIV has always been associated with the movement of people. Migration brings more people into close contact and creates a greater mixing of people at places of destination, which provides the ready environment for viral transmissions. Through the movement of infected persons,