Key Messages

- The number of identified HIV cases is on the rise in Turkey, mostly due to heterosexual transmission (63% of new cases in the last five years). Since the epidemic in Turkey remains concentrated among most-at-risk populations (MARPs), these heterosexual infections are likely due to transmission through sex work.

- Adult mobile workers in Turkey - sailors, truck drivers, construction and tourism workers - frequently engage in risky sex. On average, 35% of mobile workers engage in frequent sex with sex workers, and only 45% use condoms.

- Factors strongly associated with engaging in risky sex include: alcohol use and time away from home. Frequent alcohol use is associated with a 2.5 time increase in the likelihood of engaging in risky sex. Those workers who, on average, spend five months or more away from home are also 34% more likely to engage in risky sex.

- Greater HIV knowledge is not associated with having less risky sex, suggesting that knowledge and information alone are not enough for behavioral change.

HIV Cases Are Increasing in Turkey

Reported HIV prevalence in Turkey has historically been low - less than 0.2% adult HIV prevalence according to the latest UNAIDS and Turkish Ministry of Health (MOH) figures. However, new HIV cases have been increasing in recent years (see Figure 1). Most new cases are due to heterosexual transmission, accounting for 63% of new HIV cases in the last five years. Injecting drug use, on the other hand, accounted for only 2% of cases during the same period. Since HIV remains concentrated among most-at-risk populations (MARPs) of sex workers, men who have sex with men (MSM), and injecting drug users (IDUs), these new HIV cases due to heterosexual transmission are likely through sex with sex workers.

While several studies have been conducted in Turkey on sex workers, little evidence exists on their clients, the demand side of the commercial sex market. Research from other countries shows that mobile workers (often working-age males who spend significant time away from home) are more likely to have multiple sexual partners, including sex workers, and be HIV positive. For example, a World Bank study in Georgia found that 24% of sailors and 52% of truck drivers reported having sex with sex workers at least once a week.

Figure 1: Identified HIV and AIDS Cases in Turkey, 1985-2009

Source: Turkey Ministry of Health, 2009

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1 This Knowledge Brief is derived from the report: World Bank; Hacettepe Training, Research and Services Foundation; UN HIV/AIDS Joint Programme in Turkey; Turkey Ministry of Health. 2010. “Risky Business? HIV Knowledge, Attitudes, and Behavior among At-Risk Mobile Workers in Turkey.”


Study on HIV among Mobile Workers

In order to understand the behaviors and risks among mobile workers in Turkey, the World Bank worked in collaboration with the Hacettepe Training, Research and Services Foundation and UN HIV/AIDS Joint Programme in Turkey, at the request of the Turkey Ministry of Health, to conduct the first study in Turkey related to HIV among mobile workers. In February-March 2010, quantitative and qualitative data were collected from 1,239 mobile workers in four of the fastest growing sectors of Turkey’s economy: maritime transportation, road transportation, construction, and tourism. These workers were randomly selected from four provinces with high estimated HIV prevalence and large estimated populations of mobile workers: Istanbul, Izmir, Antalya, and Trabzon.

Risk Factors

The study found that the primary HIV-risk behavior which mobile workers engage in is unprotected sex. Injecting drug use is not common, with only 1.1% of workers reporting ever injecting drugs. Instead, mobile workers, particularly sailors and truck drivers, engage in frequent sex with multiple partners and with sex workers: 44% of sailors and 42% of truck drivers reported having two or more sexual partners in the three months prior to the study period, compared with 23% of construction workers and 30% of tourism workers. In addition, 35% of all workers said they engaged in occasional or more frequent sex with sex workers, with the highest proportion among sailors (45%) and truck drivers (38%). Interestingly, the sex with sex workers did not occur primarily while workers were abroad. The frequency of sex with sex workers was similar for workers at home (16%), workers traveling in Turkey (15%), and workers traveling abroad (17%). Unfortunately, only 45% of all workers reported using condoms during their last sexual encounter with a sex worker in the period immediately preceding the study.

While the rates of sex by adult mobile workers with sex workers were similar to those in other countries (for example, 30% in South and Southeast Asia, 21% in Brazil), the low condom usage rates are a serious concern. Studies in other countries have found much higher rates of condom usage--such as, 77% among truck drivers and 83% among sailors in Georgia, 85% among sailors and 75% among construction workers in Croatia, and 75% among construction workers in Vietnam.4

Knowledge and Awareness

Given that mobile workers in Turkey engage in frequent risky sex, what was their current level of HIV knowledge? The study found that 94% of workers had heard of HIV/AIDS, indicating high awareness of the virus and disease. Workers were generally aware that HIV or AIDS exists and they understood the basic principles of how it is spread (through unprotected sex, injecting drugs, not using condoms). However, critical myths and misconceptions about HIV and AIDS were prevalent among workers. For example, 50% of respondents believed that HIV/AIDS can be cured, and more than half believed that the disease could be contracted by sharing food and drinks with infected people. Only 37% of respondents understood that abstinence can protect against HIV infection, and only 39% knew that HIV could not be contracted from mosquito bites. Finally, knowledge of their own HIV status was low among workers, as only 8-13% of the respondents had been tested for HIV (with the exception of sailors where 35% had been tested for HIV, primarily due to mandatory testing by sailing companies).

Factors Related to Risky Sex

What are the factors driving mobile workers in Turkey to engage in risky sex? Factors associated with risky sex were examined and two factors, in particular, appeared to be strongly associated with risky sex.

First, mobile workers spend considerable time away from home, which provides them with opportunities to engage in casual and paid sex. Over 50% of workers surveyed had spent at least five months away from home in the year prior to the study. Sailors spent the most time away from home on average, whereas truckers and construction workers were more likely to spend shorter periods away from home. Tourism workers, on the other hand, showed a bimodal distribution where they either spent very little time away from home or were gone for almost the entire year (see Figure 2). All worker types traveled quite frequently, either within or outside of Turkey. Sailors and truck drivers were the primary worker types that traveled abroad in the previous year, with the top three country destinations being Russia (34.7%), Italy (18.0%) and Romania (16.8%). Overall, these workers were extremely mobile, with 97% of them spending at least one month away, and 87% spending at least two months away from home.

Second, 44% of workers reported drinking alcohol at least occasionally, and among all workers, sailors reported the highest frequency of alcohol use. Empirical research suggests that under the influence of alcohol people are more likely to make irrational or risky decisions. Prior to drinking, people may fully intend to use condoms, but after drinking, they may forget or decide that condoms are not as important. This association has been found among mobile workers - for example, in India, long distance truck drivers who consumed alcohol were found to be 2.71 times more likely to visit sex workers than those who did not drink.

To quantify the relationship of various factors with risky sex, multivariate logit regressions were conducted to control for other background characteristics such as age, income, and education. Once all characteristics were taken into account, only alcohol usage and time away from home remained significantly associated with risky sex (Table 1). The study found that workers who drank alcohol often were 2.5 times more likely to engage in risky sex compared with those who did not. Time away from home had a much smaller association - workers who spent five additional months away from home were 34% more likely to engage in risky sex. Traveling abroad had little effect, likely because being away from home was the more important factor. Finally, HIV knowledge had little or no association with risky sex, suggesting that knowledge alone is not enough for HIV prevention.

Table 1: Determinants of Risky Sex (odds ratios)

<table>
<thead>
<tr>
<th>Mobile Workers</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinks alcohol at least occasionally</td>
<td>2.506***</td>
<td>2.458***</td>
<td>2.422***</td>
<td>3.894***</td>
<td>2.772***</td>
</tr>
<tr>
<td></td>
<td>(0.370)</td>
<td>(0.726)</td>
<td>(0.678)</td>
<td>(1.230)</td>
<td>(1.347)</td>
</tr>
<tr>
<td>Months away from home</td>
<td>1.060**</td>
<td>1.114**</td>
<td>1.092*</td>
<td>1.074</td>
<td>1.059</td>
</tr>
<tr>
<td></td>
<td>(0.0258)</td>
<td>(0.0610)</td>
<td>(0.0535)</td>
<td>(0.0550)</td>
<td>(0.0654)</td>
</tr>
<tr>
<td>Traveled abroad</td>
<td>1.451*</td>
<td>1.250</td>
<td>1.594</td>
<td>0.616</td>
<td>1.692</td>
</tr>
<tr>
<td></td>
<td>(0.312)</td>
<td>(0.611)</td>
<td>(0.512)</td>
<td>(0.323)</td>
<td>(1.276)</td>
</tr>
<tr>
<td>HIV Knowledge Score</td>
<td>0.995</td>
<td>1.006</td>
<td>0.998</td>
<td>0.996</td>
<td>0.974**</td>
</tr>
<tr>
<td></td>
<td>(0.00406)</td>
<td>(0.00812)</td>
<td>(0.00759)</td>
<td>(0.00995)</td>
<td>(0.0124)</td>
</tr>
<tr>
<td>Province controls</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Sector controls</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
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<tr>
<td>Observations</td>
<td>885</td>
<td>263</td>
<td>262</td>
<td>238</td>
<td>117</td>
</tr>
</tbody>
</table>

Source: Author’s analysis
Note: Coefficients presented are odds ratios. Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. Regressions include controls for age, marital status, income, and education.


Conclusion and Recommendations

The study filled a critical gap in the HIV evidence base in Turkey by examining a set of clients on the demand side of the commercial sex market. It is necessary to recognize, however, that mobile workers are unlikely to be the sole clients of sex workers. Other population groups are also likely to be engaged in risky sex as well. A further caveat is that the study collected data only on knowledge, attitudes, and behaviors. Unfortunately, biomarker data was not collected (for example, HIV testing), so the actual risk of HIV infections and transmission could not be quantified. Although mobile workers engage in risky sex, their actual role in HIV transmission may be lessened by the high proportion of circumcised workers (99% of workers participating in the study were circumcised).

Still, the evidence presented on knowledge, attitudes, and behaviors among mobile workers can inform future policy and research. Three key recommendations can be made:

- **Better evidence and surveillance.** Biomarker data is needed to understand the true risks of sexual and drug behaviors, and the findings here could be combined with HIV testing data to understand the implications for HIV transmission. Integrated bio-behavioral studies should be conducted among at-risk groups, particularly among MSMs and IDUs. Finally, HIV sentinel surveillance (HIV prevalence surveys at regular intervals among at-risk groups - antenatal clinic attendees, STI clinic patients, MARPs, etc.) should be further developed in Turkey.

- **Increase behavioral change and condom use.** Information and knowledge are only necessary conditions for prevention and other interventions are also necessary to change behavior. Behavioral change programs that are comprehensive - including HIV education as well as other interventions such as counseling, training, social support programs, and peer groups--are critical. Increasing access to and use of condoms, particularly near the point of sexual contact, is also important to prevent HIV among mobile workers. Condom promotion efforts should perhaps target mobile workers at key locations such as truck stops and ports.

- **Continue to improve services for voluntary counseling and testing (VCT) and prevention of sexually transmitted infection (STI).** Very few workers had been tested for HIV, especially voluntarily. VCT services should continue to be expanded to provide opportunities for individuals, and their partners, to become aware of their own HIV status. Given that heterosexual transmission in Turkey accounts for the majority of identified cases in the country, increasing access to and utilization of STI prevention and treatment services can also be an effective tool in HIV prevention. STI prevention and treatment services should be expanded and developed for target populations (for example, sex workers) in Turkey.

About the Author
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