Social Relationship and HIV Testing in the Workplace: Evidence from South Africa

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Abstract

This paper explores how a worker's relational value with colleagues affects his decision to test for HIV in the workplace. We expect that a concern of being discovered HIV positive reduces a worker's incentive to take the test, because he might fail to enjoy the full extent of the value of future relationship with colleagues. Since this expected loss might be reinforced by both the strength and size of social relationship, the negative impact of relational value apparently increases with a worker's tenure and the number of connected workers. Using a worker's behavioral data drawn from a large enterprise surveyed in South Africa, this paper provides evidence to support these views. As confidentiality is rigorously enforced in the surveyed enterprise, providing all workers with an excuse to test and/or encouraging them to privately test outside the workplace might be effective when introducing a HIV counseling and testing (HCT) program into the workplace of similar kind. Our findings suggest a great difficulty in designing an effective HCT program into a corporate sector, or more generally, any small community in which members strongly connect to each other.

Keywords: HIV testing, Value of social relationship, Stigma, Fear, Corporate sector

1 Introduction

HIV testing is an entry point to receive appropriate treatment and care for infection and to prevent its transmission. Previously, HIV testing was recommended in medical settings only when those who visited a clinic are suspected with infection. This is because the main purpose of testing was to prevent transmission and limited testing technologies did not enable testing to be conducted outside clinical settings. As an international society gradually shifts its focus onto diagnosing HIV prevalence to take an appropriate HIV management policy, however, HIV testing is now to be regularly advised to everyone as a part of usual health-seeking behavior in many developing countries with high HIV prevalence. Technological innovation such as rapid testing also allowed testing to be expanded beyond health facilities, for example, into local communities and home.

For the government to precisely assess HIV prevalence in a country, those infected need to be traced property. As a matter of fact, tracing is important from an individual's standpoint because in a positive case, the test result could significantly change his/her life and he/she might continuously need appropriate counselling and treatment. When expanding HIV testing beyond medical settings, therefore, policymakers need to take into account this tracking cost.

One non-medical setting that could achieve this tracking with relatively small cost is the workplace, because a group of people voluntarily get together in a particular location for a long time. If one can successfully incorporate a HIV testing module into a company's medical check, for example, the benefit should be remarkable not only for the government challenging HIV/AIDS-related issues but also for an individual's and social welfare. Despite this natural advantage of workplace, however, only recently both policymakers and researchers in developing economies have started paying attention to a corporate sector as a place for HIV testing. As a result, what difficulty exists in introducing HIV testing into the workplace is largely unknown. This study fills this gap with a scope of social relationship in the workplace, given our preconception that it plays a major role in affecting an individual's decision to test for HIV where people closely connect to each other.

In this paper, we attempt to show that the expected loss of future relationship with colleagues reduces a worker's incentive to test for HIV. This paper

measures the value of relationship by a worker's concern about his infection being discovered by colleagues, assuming that he does not want colleagues to know his positive HIV serostatus more strongly as he places more weights on social relationship with them. Our analysis shows that relational value with colleagues indeed plays a role in preventing workers from taking a test. As a confidential procedure about HIV testing was strictly enforced in the surveyed enterprise, our finding suggests a great difficulty in designing an effective HIV counselling and testing (HCT) program in the workplace of similar kinds, or more generally, any small community in which members have strong ties.[1] Rather than encouraging workers to test for HIV voluntarily and privately, creating an excuse by which all workers have to take a test in the workplace at the same time and/or providing workers with an opportunity to take a test privately outside the workplace might more effectively increase take-up rates for HIV testing in a corporate sector.

This paper uses data drawn from the HIV Knowledge, Aptitude, Perception, and Behavior Survey (KAPB) that we conducted in 2009-2010. In this survey, we contacted almost all employees working for one local subsidiary of Japan's multinational corporation, located in a northeast province in South Africa, KwaZulu-Natal. With an estimated 5.6 million people living with HIV in 2009, South Africa is the largest HIV epidemic country in the world (UNAIDS, 2010), with KwaZulu-Natal at the upper end of its prevalence within a country. In South Africa, South African Business Coalition on HIV & AIDS (SABCOHA), a member-driven organization consisting of more than 150 private companies (as of 2011), has attempted to coordinate a corporate sector response to the HIV/AIDS epidemic since 2007. All this background is a natural reason for our choice of the surveyed site.

We expect that either positively or negatively, workers will change their behaviour towards a colleague once they know that he is infected with HIV. One straightforward mode of this change is discrimination. To the extent that a

[1]The term of HCT was introduced when the South African government launched a massive HIV testing campaign in April 2010, aiming at increasing take-up rates. Previously, the government used the term of voluntary counselling and testing (VCT). They primarily differ by a policy stance where testing is more actively recommended to anyone in a society in a frame of HCT (`http://aidsbuzz.goodwebmarketing.com/index.php?option=com_content&view=article&id=231:voluntary-counselling-and-testing-vct&catid=54:counselling-a-testing&Itemid=34`).

person infected with HIV carries a social stigma associated with a sexual misbehavior, some might avoid talking with him, sometimes, with an explicit intimidation and harassment. In fact, the previous literature often emphasizes the role of HIV/AIDS-related stigma in explaining low take-up rates for HIV testing (e.g., Parker and Aggleton, 2003; Mnyanda, 2006; Young and Bendavid, 2010; Kalichman and Simbayi, 2011; Young and Zhu, 2011). Whilst social discrimination is not the only way by which workers lose relational value with colleagues, this research can make contribution to this line of research. In contrast to the previous studies just showing a correlation between stigma and HIV testing, this study is the first rigorous empirical attempt to elicit a causal relationship between the value of social relationship and HIV testing. The current research can also be extended to more general development literature by asking why a beneficial technology, such as high-yield crops and fertilizers, is slowly adopted in developing economies (e.g., Dercon and Christiaensen, 2011; Suri, 2011). In particular, our study can link to several recent studies highlighting the role of social network by showing how the importance of social relationship varies by its strength and size in affecting a worker's decision to test for HIV. To the best of our knowledge, moreover, the current research is also the first large-scale study investigating difficulty when practicing HIV testing in a corporate sector in less advanced economies.

This paper is organized in four sections. Section 2 presents an overview of data. In Section 3, we discuss our empirical strategy followed by the estimation results. Section 4 concludes this paper.

2 Data

This paper uses data drawn from the HIV Knowledge, Aptitude, Perception, and Behavior Survey (KAPB) that we conducted in KwaZulu-Natal, South Africa in 2009-2010. The KAPB targeted all employees in one local subsidiary of Japan's multinational motor corporation, resulting in 6241 workers actually contacted, more than 90% of all employees. The purpose of the KAPB was to improve our understanding of difficulty when introducing a beneficial HIV counseling and testing (HCT) program into a corporate sector and to extend this survey to our subsequent RCT (Randomized Controlled Trial)-type policy intervention

encouraging a worker's test-taking in 2010. As this local subsidiary is a leading manufacturer producing large employment, although not randomly selected, it should still be a good role model in designing effective HCT program in the workplace of similar kind.

Table 1 reports an answer for the question of who is the first person a worker does not want to know that he is infected with HIV. As explained later, the subsequent analysis uses this criterion to proxy for the value of social relationship. By this criterion of the first person, Table 2 summarizes key variables. While it is not conclusive, it seems that those who fear to be revealed to be HIV positive are younger, work shorter for the enterprise, less likely to be in marital relationship, have less children, more educated in terms of HIV knowledge as well as general schooling, and take a riskier sexual behavior than those who have no particular person whom they do not want to know their infection with HIV. In addition, those who have the fear are more likely to know somebody who is HIV positive and less likely to have ever tested for HIV than those who have no fear. All in all, the data suggests that workers observationally vary by whether they have somebody that they do not want to know that they are infected with HIV.

3 Empirical Analysis

3.1 Empirical Strategy

Assuming that a worker takes a test for HIV if the expected present value of net gains from doing so is positive, this paper empirically attempts to show that the expected loss of future relationship with colleagues reduces his incentive to test for HIV. Throughout this paper, the value of relationship with colleagues is measured by his concern about being discovered to be HIV positive by them, with a preconception that the more weights he places on the relational value, the more strongly he fears to be discovered. On one hand, as positive HIV serostatus might be interpreted as a signal of sexual misbehavior taken in the past, those who are infected with HIV might fall into discredit or even experience workplace bullying such as intimidation, harassment and ridicule from colleagues. On the other hand, even when positive serostatus might be reacted by benevolent care

and support from colleagues, a worker might feel it a load on his mind. In both cases, once his positive HIV serostatus is known by colleagues, it is highly likely that he fails to enjoy the full extent of the value of future relationship with colleagues due to the change in their behavior towards him, which he could receive if he did not take a test. This is why this paper uses a fear of being discovered to be infected with HIV by colleagues as a proxy for the expected loss of future relationship with them.

To see if this expected loss discourages a worker to take a test, we model a decision of a worker i in a working area j as

$$\text{Prob}(T_{ij} = 1) = \text{Prob}(\alpha_1 + \alpha_2 v_i^{col} + \alpha_3' \mathbf{x_i} + \omega_j + \epsilon_{ij} > 0), \tag{1}$$

where T_{ij} takes one if he tests for HIV and zero otherwise; v_i^{col} captures his relational value with colleagues; the vector $\mathbf{x_i}$ includes the determinants of costs and benefits of test-taking specific to the worker; any unobserved area-level characteristics characterizing the net gains from testing is measured by a working area dummy ω_j; and the random error ϵ_{ij} is independently and identically distributed as a standard normal variable. Based upon the aforementioned argument, this paper expects negative α_2. In Table 1 presenting the first person a worker does not want to know that he is infected with HIV, almost half the respondents answered 'no one in particular', whereas approximately 20% and 30% of workers selected 'colleagues' and 'non-colleagues', respectively. In this paper, we proxy the relational value v_i^{col} by a dummy equal to one if this first person is 'colleagues' and zero otherwise. In the analysis, we also include a dummy for 'non-colleagues' v_i^{ncol} as an additional control.

Several empirical challenges arise. Firstly, the variable T_{ij} available to us is a worker's test experience in the past, whereas his relational value v_i^{col} is estimated exactly at the point of survey. While most workers took a test in the relatively recent past under both national and international excitements about AIDS campaign (see Figure 1 for the distribution), this make the estimation result of (1) hard to interpret. To mitigate this interpretation problem, the benchmark analysis in this paper limits sample workers into those who tested for HIV in recent years of 2008-2010 and those have never tested before.

This periodicity issue could still be a confounding factor, because reverse causality is possible. For example, test experience in the recent past might drive a worker to fear less to be discovered by colleagues, if he received support

from them when testing for HIV and being discovered HIV positive. This biases the estimated α_2 downwards.

Another empirical concern is unobserved individual characteristics. Those who have appropriate knowledge about HIV/AIDS are less likely to fear and more likely to take a test, for instance. Alternatively, a worker might show little propensity to test and great propensity to fear, provided that he has close colleagues who tend to take a risky sexual behavior and were treated badly by other colleagues due to infection with HIV in the past. More generally, it is also possible that a worker is just nervous about being discovered and shy of taking a test.

By virtue of cross-sectional nature of data, our identification strategy primarily has to rely on a conditional independence assumption (CIA) (e.g., see Angrist and Pischke (2009, pp. 52-59) for a brief overview); conditional on observables, the relational value v_i^{col} is statistically independent of a worker's decision to take a test. To make this assumption plausible, for example, the analysis controls for a worker's knowledge about HIV/AIDS by using test scores (0-16), as well as the level of education. This survey designed 16 questions of 'true-false' format to measure a worker's understanding about HIV/AIDS. When this test is too difficult or too easy, the scores might not reveal any difference in knowledge among workers, showing that all achieve either full or zero mark. Figure 2, which provides the graphical representation of the distribution of the test scores, excludes this possibility. A worker's social environment might also affect not only his sexual behavior (and the subsequent test-taking decision) but also the process of building a concern about being revealed HIV positive. Since these factors are likely to be influenced by whether a worker is surrounded by relatives, neighbors, and colleagues, who are or are suspected to be HIV positive and/or have died of AIDS related illness, and whether he knows how they were treated by others, the analysis also includes this information as regressors. Shared understandings in a working area about sexual behavior and attitudes towards sexually transmitted diseases (STDs) will partly be controlled for by area fixed effects ω_j (63 areas).

Despite many controls included in a regression analysis, however, the CIA might still be too strong to be accepted. To avoid incorrect inference and draw a robust picture from the analysis, this study provides additional support for our view that high relational value with colleagues makes workers hesitant to

test for HIV. Two strategies are taken. Firstly, suppose that the relational value with colleagues is a deterrence of a worker's test-taking decision, the negative effect is seemingly magnified if he is socialized with many colleagues and the relationship is deep. This is because he has much more to lose once discovered to be infected with HIV. By measuring the size of a worker's social network by the number of colleagues in his team whose phone number he knows and the strength of social relationship by his tenure, with both denoted by a vector $\mathbf{z_i}$, we estimate

$$\text{Prob}(T_{ij}=1) = \text{Prob}(\beta_1 + \beta_2 v_i^{col} + \beta_3' v_i^{col}\mathbf{z_i} + \beta_4 v_i^{ncol} + \beta_5' v_i^{ncol}\mathbf{z_i} + \beta_6'\mathbf{x_i} + \omega_j + \epsilon_{ij} > 0), \quad (2)$$

where $\mathbf{z_i}$, a dummy equal to one for upper 50% quantile of each variable, is a part of $\mathbf{x_i}$; for tractability's sake, we exploited a discrete measure for $\mathbf{z_i}$ in this paper. As described above, negative β_3 is anticipated. Moreover, we expect the interaction effects with the size and quality of social network to exist only in association with relational value with colleagues, not with non-colleagues, because the network used in this analysis is organized at the level of working place. In sharp contrast to the negative β_3, therefore, it is likely that $\beta_5 = 0$.

Another strategy is also grounded on the interaction effect between the relational value with colleagues and the network size. But now, a distinction of network between inside and outside a worker's team is made as

$$\text{Prob}(T_{ij}=1) = \text{Prob}(\gamma_1 + \gamma_2 v_i^{col} + \gamma_3 v_i^{col} z_i^{in} + \gamma_4 v_i^{col} z_i^{out} + \gamma_5'\mathbf{x_i} + \omega_j + \epsilon_{ij} > 0), \quad (3)$$

where z_i^{in} and z_i^{out} are again dummies for upper 50% quantile of the number of colleagues whose phone number he knows inside and outside his team, respectively and here we assumed away tenure for expositional simplicity. To the extent that the negative effect of expected loss of future relationship with colleagues on a worker's test-taking decision is strengthened by the size of his social network, the impact should be larger as the network is more important to him. Since a worker appears to communicate with colleagues in the same team in his day-to-day work more intensively than colleagues outside his team, we expect that $\gamma_3 < 0$ but not necessarily $\gamma_4 < 0$.

To keep the interpretation of the main effect of relational value across specifications, finally, the variables v_i and $\mathbf{z_i}$ were demeaned in (2) and (3) before interacting them (Ozer-Balli and Sørensen, 2011). By this demeaning, β_2 and

γ_2 can be interpreted as a partial effect of v_i^{col}, evaluated at the mean value of $\mathbf{z_i}$. This interpretation implicitly corresponds to α_2 in (1).

3.2 Estimation Results

3.2.1 Main Results

With no control of interaction terms, equation (2) is estimated in columns (a) and (b) in Table 3 either with or without working area fixed effects. As expected, the results show that a concern of being discovered HIV positive by colleagues reduces a worker's incentive to test for HIV with 1% and 5% significance, respectively. Including the interaction terms, columns (c) and (d) estimate (2) again either without or with a control of the area fixed effects. The interaction effects with the size of a worker's network and the strength of his social relationship are significantly negative only in association with relational value with colleagues, not with non-colleagues. The absence of the interaction effects of relational value with non-colleagues supports our views that a fear of being revealed HIV positive by colleagues is a good proxy for a worker's relational value with them and that the previously identified negative effect is not just a spurious correlation.

While we measure a worker's relational value with colleagues by a person that he does not want to know that he is HIV positive, the measure is only based upon the first person. However, it is certainly possible that those who selected 'non-colleagues' as an answer for the first person question still fear to be discovered by colleagues. In fact, about 28% of those who selected some category of 'non-colleagues' as the first person designated 'colleagues' as the second person that they did not want to know their infection with HIV (see column (c) in Table 1). Similarly, column (b) in Table 1 shows that approximately 87% of those who selected 'colleagues' as the first person are also reluctant to be discovered by non-colleagues as the second person. These suggest that our measure of social relationship might be undervalued. Redefining v_i^{col} (v_i^{ncol}) as a dummy which takes one if either the first or the second person is 'colleagues' ('non-colleagues'), column (e) in Table 3 estimated (2). Whilst the original effect of relational value with colleagues has gone, the interaction effects with the size of a worker's network and the strength of his social relationship are negative and

insignificantly different from those in column (d), still supporting our view.[2]

To avoid confusion about interpretation of the estimation results, we limited our sample those who took a test between 2008 and 2010 and those who have never tested before. However, this might unnecessarily have generated (if any) a sample selection problem. To make sure that this concern did not confound the previous results, column (f) estimated (2) by using all workers. An implication from the analysis remained unchanged.

Since a risky sexual behavior taken in the past is likely to affect the process of building a concern about being discovered and a worker's decision to test for HIV, column (g) additionally included several controls for it: a dummy for having had sexual intercourse with a person likely infected with HIV in the last 12 months; a dummy for previous experience of sexually transmitted diseases (STDs) exclusive of HIV; a dummy equal to one if the last or the second last sexual partner is casual acquaintance and a dummy which takes one if a worker did not use a condom at that sexual intercourse; the number of sexual partners in the last 12 months; and the number of condoms stocked at home. Since the most recent sexual intercourse is largely experienced within one year from the point of survey (about 98% of those who have ever had sexual intercourse), we dropped those who tested for HIV in 2008, again, to mitigate an interpretation problem in this column. Whilst simply putting in these controls might be challenged not only because they are endogenous but also because some regressors already included in the regression might explain them, the result still draws a similar picture to the previous results.

Column (h) reports the estimation result of equation (3) by including the size of network outside a worker's team. The interaction effect between relational value with colleagues and his social network is significantly negative only in relation to inside his team, not outside. This result is consistent with our view that the negative effect of relational value with colleagues increases with the importance of social network.

[2]Whilst the significance of the interaction effect between the relational value with colleagues and the size of network has also gone in column (e) in Table 3, this seems to be a matter of cut-off point. Using upper 25% quantile instead of upper 50% quantile identifies the larger negative interaction effect with 1% significance. This tendency of using upper 25% quantile magnifying the interaction effect with strong significance holds in all regressions presented in Table 3.

3.2.2 Information Leakage

The negative impact of relational value with colleagues suggests a worker's implicit assumption that their test results might get out in a workplace through some mechanism. In the survey, workers were required to grade their perception from scale 0 to 10 about the likelihood that non-medical personnel in a company may know their test results if they go for HCT at a company clinic. If this information leakage from medical to non-medical stuff is the source of their concern about test results being discovered by colleagues, putting in this score is likely to eliminate the impact of relational value with colleagues, although whether the subjective score is comparable across workers might be debatable. This mouth-to-mouth channel is not supported in column (i) in Table 3, however. While the estimation does not include those who had difficulty in grading (about 22% of total workers) and about 68% of those who graded expected no likelihood (score 0), it seems that this is not a main mechanism workers worry about as a source of information spread.

3.2.3 Internal versus External Clinic

The preceding analysis did not make a distinction about where workers took a test, although some tested at an internal clinic affiliated with the company and others did at an external clinic. Suppose that the expected loss of future relationship with colleagues discourages workers to test for HIV, those who value the relationship more highly are less likely to take a test at the company clinic, provided that they expect higher likelihood of test results being disclosed when testing at the company clinic than at the external clinic. To see if this is true, we estimated a multinomial logit model by making the distinction, given an assumption that the ratio of probabilities for any two alternatives (from internal, external or not testing) does not depend upon how likely a worker chooses the other alternative (Independence from irrelevant alternatives, IIA).

Whilst strong, the IIA assumption might not be so absurd in this study because workers are very selective in clinics they visit. The surveyed company offers a health insurance program, 'medical aid' to employees. Once they choose to be a member of the scheme, the insurance pays for medical services they receive at the company clinic, including HIV/AIDS-related services. According

to our conversation with company staff, white-collar workers tend to purchase private (and somewhat expensive) insurance outside the company and, if they test for HIV, they prefer to do so at an external clinic. In fact, the company clinic was largely occupied by blue-collar workers when we paid a visit during the survey. All these suggest that the internal and external clinics are not close substitutes, providing some support for the IIA assumption.

Columns (j) and (k) in Table 3 report the impact on log odds ratio when not taking a test is a base outcome. Whilst the interaction effect between relational value with colleagues and the size of network is somewhat stronger for those tested at the company clinic than at the external clinic, all the impacts of the relational value with colleagues and the interaction effects with the size of social network and the strength of social relationship insignificantly differ by the location of clinics. As long as workers are encouraged to test for HIV voluntarily and privately, those have a concern about test results being revealed by colleagues are equally reluctant to take a test at *any* clinic.

To sum up, the choice of clinics conditional on testing for HIV seemingly depends upon the types of health insurance workers have and their affordability to purchase different types of insurance, rather than their fear of being discovered. In consistent with our conversation with company staff, finally, also note that there is relatively clear sorting by which workers are more likely to test outside the company if they are more educated (and probably, wealthier).

4 Conclusion

Using a worker's behavioral data drawn from a large enterprise surveyed in a northeast province in South Africa, KwaZulu-Natal in 2009-2010, this paper explored how a worker's relational value with colleagues affects his decision to test for HIV in the workplace. In consistent with our expectation that a worker might fail to enjoy the full extent of the value of future relationship with colleagues once he is revealed HIV positive by colleagues, this paper found that this concern about being discovered reduces his incentive to test for HIV.

Empirically, one concern remains about the endogeneity in the process of a worker building such concern. Whilst cross-sectional nature of data limited our ability to fully control for the endogeneity, this paper also found that the

negative impact of relational value increases with a worker's tenure (a proxy for strength of relationship) and the number of connected workers (a proxy for size of relationship) and that the size effect of social relationship works only in relation to his closely connected workers. All this evidence confirms that the negative impact of relational value is not a spurious correlation.

As confidentiality about test-taking was rigorously enforced in the surveyed enterprise, our findings suggest that just encouraging workers to test for HIV voluntarily and privately with strict confidentiality will not make much difference in increasing take-up rates for HIV testing. On top of the confidential procedure, providing all workers with an excuse to take a test at the same time and/or inducing them to privately test outside the workplace might be effective when introducing a HIV counseling and testing (HCT) program into the workplace of similar kind. Beyond the workplace, moreover, this policy implication might be extended to any small community in which members strongly connect to each other.

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Table 1: Proportion of the First/Second Person that a Worker does not Want to Know His Infection with HIV

	1st	2nd if 1st is	
		'colleagues'	'non-colleagues'
	(a)	(b)	(c)
(1) Colleagues	0.20	0.01	0.28
(2) Non-colleagues	0.31	0.87	0.58
Spouse	0.02	0.00	0.01
Children	0.02	0.00	0.05
Other family members	0.04	0.02	0.07
Relatives	0.02	0.04	0.08
Unmarried partner	0.00	-	0.00
Boy/girl friends	0.00	0.00	0.01
Neighbors	0.13	0.65	0.14
Friends	0.04	0.12	0.16
Other	0.01	0.02	0.02
(3) No one in particular	0.48	0.10	0.12
No. of workers	6199	1227	1930

Notes: (1) The second person was not asked those who answered 'no one in particular' as the first person. (2) The number is the proportion to the total number of workers in each column.

Table 2: Summary Statistics

	The first person you do not want to know you are infected with HIV.								
	Collegues			Non-colleagues			No one in particular		
	Mean	std.	No. of obs.	Mean	std.	No. of obs.	Mean	std.	No. of obs.
Tested (dummy)	0.65*	[0.01]	1241	0.64**	[064]	1943	0.68	[0.08]	3036
Tenure (years)	9.21***	[0.22]	1242	9.64***	[0.20]	1948	10.71	[0.16]	3048
Network size (inside a team)	5.66***	[0.20]	1234	7.25	[0.30]	1921	6.68	[0.26]	3017
Network size (outside a team)	10.52	[0.64]	1230	21.08	[5.34]	1921	13.67	[2.05]	3008
Male (dummy)	0.81	[0.01]	1234	0.78***	[0.09]	1911	0.83	[0.00]	3029
Married (dummy)	0.45***	[0.01]	1242	0.48***	[0.48]	1943	0.52	[0.00]	3044
Age dummy									
Aged 29 below	0.32**	[0.01]	1236	0.35***	[0.01]	1894	0.28	[0.00]	3011
Aged 30-39	0.36***	[0.01]	1236	0.29	[0.01]	1894	0.31	[0.00]	3011
Aged 40-49	0.23	[0.01]	1236	0.22**	[0.00]	1894	0.24	[0.00]	3011
Aged 50 or above	0.08***	[0.00]	1236	0.11***	[0.00]	1894	0.14	[0.00]	3011
Education dummy									
No education	0.003**	[0.003]	1235	0.001***	[0.000]	1933	0.008	[0.001]	3028
Lower primary	0.01	[0.00]	1235	0.009	[0.00]	1933	0.01	[0.00]	3028
Higher primary	0.06	[0.00]	1235	0.05*	[0.00]	1933	0.06	[0.00]	3028
High school	0.58**	[0.01]	1235	0.55	[0.01]	1933	0.54	[0.00]	3028
Tertiary	0.30***	[0.01]	1235	0.37	[0.01]	1933	0.35	[0.00]	3028
Master	0.01	[0.00]	1235	0.01	[0.00]	1933	0.01	[0.00]	3028
Doctor	-	-	-	0.00	[0.00]	1933	0.00	[0.00]	3028
Other	0.008*	[0.002]	1235	0.003	[0.001]	1933	0.003	[0.001]	3028
Have mobile (dummy)	0.94	[0.06]	1240	0.95	[0.00]	1936	0.94	[0.00]	3034
Commuting time (minutes)	33.45*	[0.63]	1240	33.15	[0.54]	1937	32.09	[0.41]	3044
No. of children aged 15 below	1.48*	[0.04]	1229	1.38***	[0.03]	1903	1.58	[0.03]	3003
HIV prevalence in Network									
Having HIV+ Colleagues (one if yes)									
× Treated badly	0.02**	[0.00]	1242	0.02	[0.00]	1949	0.01	[0.00]	3050
× Supported	0.07	[0.00]	1242	0.08	[0.00]	1949	0.07	[0.00]	3050
× Nothing changed	0.06	[0.00]	1242	0.06	[0.00]	1949	0.08	[0.00]	3050
× Don 't know	0.03	[0.00]	1242	0.03	[0.00]	1949	0.03	[0.00]	3050
Having HIV+ Relative (one if yes)									
× Treated badly	0.01	[0.00]	1242	0.02***	[0.00]	1949	0.01	[0.00]	3050
× Supported	0.27***	[0.01]	1242	0.24**	[0.00]	1949	0.22	[0.00]	3050
× Nothing changed	0.11**	[0.00]	1242	0.08	[0.00]	1949	0.09	[0.00]	3050
× Don 't know	0.03	[0.00]	1242	0.03**	[0.00]	1949	0.02	[0.00]	3050
Having HIV+ Neighbours (one if yes)									
× Treated badly	0.04***	[0.00]	1242	0.04***	[0.00]	1949	0.02	[0.00]	3050
× Supported	0.13*	[0.00]	1242	0.14***	[0.00]	1949	0.11	[0.00]	3050
× Nothing changed	0.08	[0.00]	1242	0.08*	[0.00]	1949	0.10	[0.00]	3050
× Don 't know	0.06	[0.00]	1242	0.07**	[0.00]	1949	0.06	[0.00]	3050
HIV knowledge test score (0-16)	13.22***	[0.08]	1242	12.63	[0.06]	1949	12.72	[0.05]	3050
Belief about information leakage (0-10)	1.43	[0.08]	1036	1.80***	[0.07]	1525	1.31	[0.05]	2246
Risky behaviour									
Sex with a person likely infected with HIV (dummy)	0.07**	[0.00]	1064	0.08***	[0.00]	1711	0.05	[0.00]	2686
STD experience (dummy)	0.23***	[0.01]	1196	0.23***	[0.00]	1849	0.17	[0.00]	2859
Total no. of sex partners in the last 12mth.	1.89*	[0.07]	1169	1.79	[0.06]	1784	1.72	[0.04]	2746
No. of condoms at home	1.59	[0.08]	1188	1.67	[0.08]	1836	1.61	[0.09]	2849

Note: The equality of means between 'colleagues' and 'No one in particular' and 'Non-colleagues' and 'No one in particular' are examined by T-tests, assuming unequal variance. The degree of freedom is approximated by Satterthwaite. *** denotes significance at 1%, ** at 5%, and * at 10%.

Table 3: Results: A Concern about Test Results Revealed

	Probit (marginal effect)									Multinomial logit (Impacts on (log odds ratio)	
	Baseline				1st & 2nd person	All tests in the past	With a control of				
							risky behavior	network outside a team	inf. leakage		
Dependent var.	One if tested in 2008-2010					one if tested	One if tested in 2009-2010	one if tested in 2008-2010		Base: not tested	
										tested at TSA	tested at non-TSA
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Relational value with colleagues (relvalc)	-0.046***	-0.032**	-0.051***	-0.036**	0.004	-0.036***	-0.035	-0.035**	-0.059***	-0.173**	-0.151*
	[0.015]	[0.016]	[0.015]	[0.015]	[0.016]	[0.014]	[0.028]	[0.015]	[0.022]	[0.079]	[0.082]
relvalc × tenure			-0.090***	-0.085***	-0.065*	-0.073***	-0.106**	-0.084***	-0.138***	-0.327***	-0.377**
			[0.025]	[0.026]	[0.034]	[0.019]	[0.042]	[0.027]	[0.031]	[0.123]	[0.150]
relvalc × network size (inside a team)			-0.065**	-0.077**	-0.039	-0.066**	-0.151***	-0.088***	-0.067	-0.415**	-0.248
			[0.031]	[0.032]	[0.029]	[0.032]	[0.043]	[0.033]	[0.041]	[0.187]	[0.178]
relvalc × network size (outside a team)								0.031			
								[0.031]			
Relational value with non-colleagues (relvalnc)	-0.055***	-0.029	-0.053***	-0.028	-0.034*	-0.020	-0.021	-0.028	-0.038	-0.174*	-0.090
	[0.020]	[0.020]	[0.020]	[0.020]	[0.019]	[0.015]	[0.030]	[0.019]	[0.024]	[0.099]	[0.093]
relvalnc × tenure			0.033	0.034	0.028	0.042	0.018	0.034	0.017	0.455***	-0.087
			[0.036]	[0.035]	[0.032]	[0.033]	[0.042]	[0.035]	[0.034]	[0.175]	[0.165]
relvalnc × network size (inside a team)			-0.002	-0.018	-0.013	-0.004	-0.048	-0.023	-0.020	0.028	-0.182
			[0.030]	[0.029]	[0.026]	[0.026]	[0.038]	[0.030]	[0.037]	[0.175]	[0.150]
relvalnc × network size (outside a team)								0.028			
								[0.029]			
Tenure	0.022	0.010	0.024	0.012	0.011	0.023	0.005	0.011	0.025	0.093	0.011
(upper 50%)	[0.021]	[0.024]	[0.022]	[0.024]	[0.024]	[0.019]	[0.028]	[0.024]	[0.029]	[0.139]	[0.110]
Network size (inside)	0.064***	0.070***	0.062***	0.069***	0.070***	0.059***	0.067***	0.059***	0.065***	0.280***	0.308***
(upper 50%)	[0.018]	[0.017]	[0.018]	[0.017]	[0.017]	[0.015]	[0.019]	[0.019]	[0.018]	[0.093]	[0.070]
Network size (outside)								0.044***			
(upper 50%)								[0.017]			
Male	-0.185***	-0.188***	-0.187***	-0.190***	-0.188***	-0.163***	-0.254***	-0.191***	-0.177***	-0.786***	-0.957***
	[0.018]	[0.019]	[0.018]	[0.019]	[0.019]	[0.016]	[0.022]	[0.019]	[0.020]	[0.124]	[0.106]
Married	0.048**	0.045**	0.049**	0.046**	0.046**	0.050***	0.042**	0.047**	0.044*	0.125	0.241**
	[0.020]	[0.020]	[0.019]	[0.019]	[0.020]	[0.017]	[0.018]	[0.019]	[0.023]	[0.097]	[0.093]
Aged 30-39	0.048*	0.028	0.047*	0.027	0.027	0.043*	0.017	0.029	0.028	0.113	0.140
	[0.025]	[0.024]	[0.024]	[0.024]	[0.024]	[0.025]	[0.027]	[0.024]	[0.026]	[0.097]	[0.092]
Aged 40-49	-0.035	-0.064**	-0.037	-0.065**	-0.066**	-0.031	-0.097***	-0.062**	-0.057*	-0.257*	-0.266**
	[0.031]	[0.029]	[0.031]	[0.029]	[0.029]	[0.027]	[0.033]	[0.029]	[0.032]	[0.143]	[0.133]
Aged 50 or above	-0.081**	-0.113***	-0.089**	-0.119***	-0.117***	-0.100***	-0.151***	-0.113***	-0.122***	-0.371**	-0.644***
	[0.037]	[0.037]	[0.038]	[0.037]	[0.037]	[0.034]	[0.049]	[0.036]	[0.037]	[0.213]	[0.161]
Education											
Lower primary	0.034	0.021	0.036	0.022	0.023	-0.009	0.025	0.029	-0.086	-0.064	0.406
	[0.155]	[0.156]	[0.153]	[0.155]	[0.154]	[0.115]	[0.185]	[0.155]	[0.172]	[0.563]	[1.003]
Higher primary	-0.042	-0.056	-0.041	-0.056	-0.054	-0.066	-0.112	-0.055	-0.178	-0.447	0.126
	[0.171]	[0.171]	[0.172]	[0.171]	[0.170]	[0.132]	[0.174]	[0.171]	[0.182]	[0.621]	[0.918]
High school	-0.005	-0.031	-0.007	-0.034	-0.031	-0.028	-0.133	-0.037	-0.154	-0.480	0.363
	[0.149]	[0.147]	[0.149]	[0.146]	[0.146]	[0.106]	[0.153]	[0.146]	[0.142]	[0.535]	[0.857]
Tertiary	0.071	0.046	0.068	0.043	0.046	0.048	-0.045	0.038	-0.082	-0.375	0.860
	[0.152]	[0.151]	[0.152]	[0.151]	[0.150]	[0.109]	[0.169]	[0.150]	[0.162]	[0.583]	[0.856]
Master	0.113	0.098	0.116	0.102	0.100	0.123	0.010	0.093	0.109	-0.359	1.276
	[0.151]	[0.152]	[0.150]	[0.151]	[0.150]	[0.101]	[0.194]	[0.153]	[0.151]	[0.641]	[0.952]
Other	0.046	-0.011	0.052	-0.006	-0.011	-0.043	0.000	-0.015	-0.113	-0.314	0.512
	[0.186]	[0.185]	[0.185]	[0.184]	[0.184]	[0.154]	[0.232]	[0.185]	[0.223]	[0.897]	[0.838]
Have mobile	-0.026	-0.027	-0.026	-0.027	-0.028	-0.033	-0.011	-0.038	-0.008	-0.045	-0.201
	[0.034]	[0.034]	[0.034]	[0.034]	[0.034]	[0.028]	[0.051]	[0.035]	[0.036]	[0.202]	[0.158]
Commute	-0.000	0.000	-0.000	0.000	0.000	-0.000	0.000	0.000	-0.000	-0.001	0.001
(minutes)	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.001]	[0.001]
No. of children aged 15 below	0.000	0.001	-0.000	0.000	0.000	0.000	0.000	-0.000	-0.000	0.012	-0.007
	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]	[0.005]	[0.007]	[0.006]	[0.006]	[0.029]	[0.030]
Having HIV+ Colleagues × Treated badly	0.044	0.048	0.049	0.055	0.050	0.057	0.055	0.051	0.053	0.399	0.040
	[0.054]	[0.052]	[0.054]	[0.052]	[0.052]	[0.039]	[0.059]	[0.052]	[0.059]	[0.286]	[0.257]
× Supported	0.087***	0.081***	0.085***	0.080***	0.081***	0.058**	0.080*	0.075***	0.056**	0.545***	0.151
	[0.027]	[0.027]	[0.027]	[0.027]	[0.027]	[0.023]	[0.043]	[0.027]	[0.027]	[0.146]	[0.110]
× Nothing changed	0.100***	0.098***	0.100***	0.098***	0.097***	0.079***	0.103***	0.094***	0.071***	0.547***	0.335***
	[0.021]	[0.022]	[0.021]	[0.021]	[0.022]	[0.018]	[0.034]	[0.021]	[0.026]	[0.138]	[0.096]
× Don t know	0.108***	0.111***	0.107***	0.110***	0.112***	0.096***	0.181***	0.107***	0.115***	0.610***	0.411*
	[0.037]	[0.039]	[0.037]	[0.039]	[0.039]	[0.034]	[0.053]	[0.039]	[0.041]	[0.231]	[0.226]
Having HIV+ Relative × Treated badly	0.072	0.067	0.075	0.069	0.070	0.044	0.103*	0.071	0.048	0.573**	0.017
	[0.052]	[0.052]	[0.053]	[0.053]	[0.052]	[0.048]	[0.057]	[0.054]	[0.053]	[0.279]	[0.288]
× Supported	0.049***	0.054***	0.048***	0.053***	0.053***	0.039***	0.047**	0.052***	0.037**	0.308***	0.147**
	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.013]	[0.023]	[0.013]	[0.016]	[0.058]	[0.072]
× Nothing changed	0.080***	0.084***	0.077***	0.081***	0.082***	0.071***	0.093***	0.081***	0.060*	0.439***	0.270**
	[0.025]	[0.023]	[0.026]	[0.024]	[0.023]	[0.022]	[0.036]	[0.023]	[0.031]	[0.126]	[0.120]
× Don t know	0.033	0.039	0.033	0.038	0.038	0.028	0.048	0.034	0.027	0.304	0.046
	[0.048]	[0.050]	[0.049]	[0.050]	[0.050]	[0.047]	[0.066]	[0.050]	[0.054]	[0.247]	[0.246]
Having HIV+ Neighbours × Treated badly	-0.032	-0.014	-0.031	-0.013	-0.015	-0.013	-0.005	-0.009	-0.024	-0.202	0.085
	[0.053]	[0.054]	[0.053]	[0.053]	[0.054]	[0.050]	[0.070]	[0.054]	[0.051]	[0.273]	[0.231]
× Supported	-0.047**	-0.031*	-0.045**	-0.029	-0.030*	-0.025	-0.034	-0.031*	-0.031*	-0.147*	-0.099
	[0.018]	[0.018]	[0.018]	[0.018]	[0.018]	[0.016]	[0.027]	[0.018]	[0.018]	[0.089]	[0.105]
× Nothing changed	-0.039	-0.039	-0.037	-0.037	-0.038	-0.030	-0.028	-0.037	-0.039	-0.231*	-0.090
	[0.024]	[0.026]	[0.024]	[0.026]	[0.026]	[0.023]	[0.028]	[0.026]	[0.029]	[0.128]	[0.113]
× Don t know	-0.063**	-0.047	-0.061*	-0.045	-0.045	-0.044*	-0.008	-0.044	-0.030	-0.333**	-0.084
	[0.031]	[0.033]	[0.031]	[0.033]	[0.033]	[0.026]	[0.040]	[0.033]	[0.037]	[0.161]	[0.147]
HIV knowledge (test scores)	0.024***	0.024***	0.024***	0.023***	0.023***	0.020***	0.027***	0.023***	0.021***	0.103***	0.099***
	[0.003]	[0.004]	[0.003]	[0.004]	[0.004]	[0.003]	[0.005]	[0.004]	[0.004]	[0.022]	[0.013]
Information leakage									-0.003		
									[0.003]		
Risky behaviour											
Sex with a person likely infected with HIV							0.032				
							[0.038]				
STD experience (exluding HIV)							-0.014				
							[0.017]				
Casual acquaintance in the last sex (ca1)							-0.090				
							[0.133]				
Casual acquaintance in the 2nd last sex (ca2)							0.239*				
							[0.130]				
ca1 × no codom use							-0.195				
							[0.182]				
ca2 × no codom use							0.035				
							[0.339]				
No. of sexual partners in the last 12 mths.							-0.004				
							[0.005]				
No. of condoms							-0.000				
							[0.002]				
Area FE	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	4959	4921	4959	4921	4921	5876	3174	4921	3824	4948	4948

Notes: (1) Figures [ ] are standard errors. *** denotes significance at 1%, ** at 5%, and * at 10%. (2) Standard errors are robust to heteroskedasticity and clustered residuals within each working area.

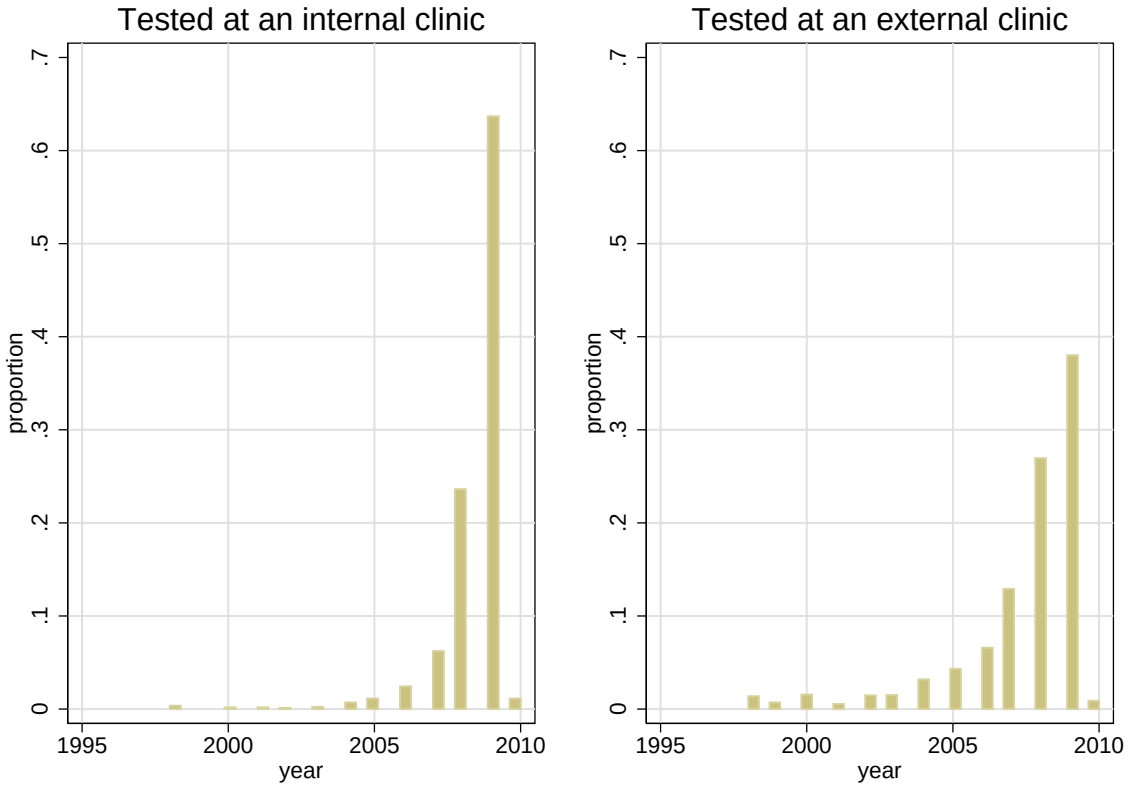

Figure 1: Year of last HIV test

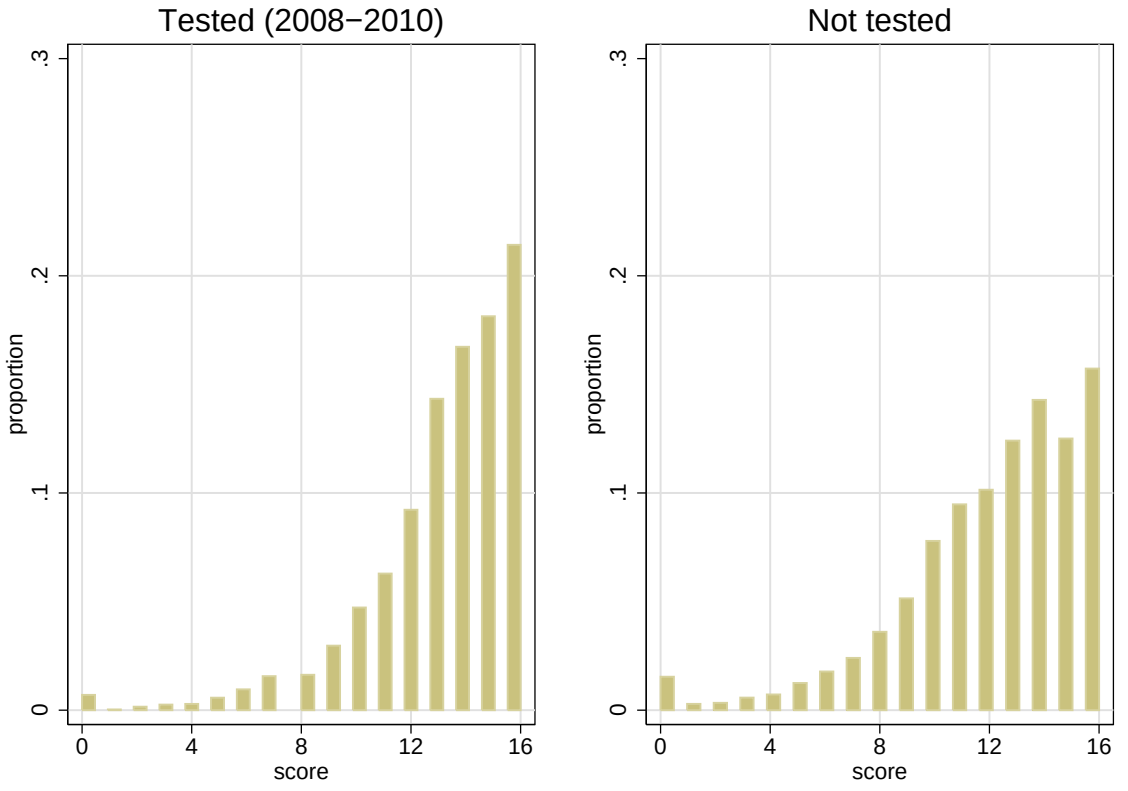

Figure 2: Distribution of Test Scores

Table 4: Appendix: A Concern about Test Experience Revealed

	Probit (marginal effect)									Multinomial logit (Impacts on (log odds ratio)	
	Baseline				1st & 2nd person	All tests in the past	With a control of				
							risky behavior	network outside a team	inf. leakage		
Dependent var.	One if tested in 2008-2010					one if tested	One if tested in 2009-2010	one if tested in 2008-2010		Base: not tested	
										tested at TSA	tested at non-TSA
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Relational value with colleagues (relvalc)	-0.056*** [0.018]	-0.038** [0.017]	-0.062*** [0.018]	-0.043** [0.017]	0.019 [0.020]	-0.045*** [0.015]	-0.051** [0.022]	-0.041** [0.016]	-0.066*** [0.016]	-0.201** [0.079]	-0.185** [0.093]
relvalc × tenure			-0.047 [0.034]	-0.030 [0.034]	-0.028 [0.046]	-0.019 [0.030]	0.006 [0.042]	-0.029 [0.035]	-0.040 [0.045]	-0.162 [0.181]	-0.078 [0.188]
relvalc × network size (inside a team)			-0.067** [0.031]	-0.076** [0.031]	-0.012 [0.033]	-0.054* [0.029]	-0.101* [0.056]	-0.077** [0.030]	-0.057 [0.039]	-0.609*** [0.150]	-0.022 [0.203]
relvalc × network size (outside a team)								0.013 [0.044]			
Relational value with non-colleagues (relvalnc)	-0.088*** [0.018]	-0.058*** [0.018]	-0.086*** [0.018]	-0.057*** [0.018]	-0.066*** [0.019]	-0.055*** [0.014]	-0.074*** [0.022]	-0.056*** [0.018]	-0.061*** [0.017]	-0.341*** [0.104]	-0.178* [0.093]
relvalnc × tenure			0.036 [0.027]	0.017 [0.029]	0.018 [0.038]	0.020 [0.027]	0.019 [0.042]	0.015 [0.029]	0.025 [0.032]	0.297* [0.152]	-0.063 [0.138]
relvalnc × network size (inside a team)			0.032 [0.039]	0.030 [0.036]	-0.007 [0.036]	0.029 [0.033]	0.020 [0.036]	0.022 [0.040]	0.046 [0.036]	0.093 [0.189]	0.136 [0.186]
relvalnc × network size (outside a team)								0.033 [0.038]			
Tenure (upper 50%)	0.022 [0.021]	0.010 [0.023]	0.024 [0.021]	0.011 [0.024]	0.010 [0.024]	0.023 [0.019]	0.005 [0.028]	0.009 [0.024]	0.021 [0.029]	0.087 [0.135]	0.006 [0.109]
Network size (inside) (upper 50%)	0.063*** [0.018]	0.070*** [0.017]	0.062*** [0.018]	0.069*** [0.017]	0.070*** [0.017]	0.059*** [0.015]	0.067*** [0.019]	0.059*** [0.019]	0.064*** [0.018]	0.276*** [0.095]	0.306*** [0.070]
Network size (outside) (upper 50%)								0.042** [0.017]			
Male	-0.186*** [0.019]	-0.188*** [0.020]	-0.187*** [0.018]	-0.190*** [0.019]	-0.188*** [0.019]	-0.163*** [0.016]	-0.255*** [0.022]	-0.190*** [0.019]	-0.175*** [0.020]	-0.780*** [0.126]	-0.955*** [0.105]
Married	0.045** [0.020]	0.044** [0.020]	0.046** [0.020]	0.044** [0.020]	0.044** [0.020]	0.048*** [0.017]	0.040** [0.018]	0.045** [0.020]	0.043* [0.023]	0.115 [0.100]	0.238*** [0.094]
Aged 30-39	0.048* [0.024]	0.028 [0.024]	0.047* [0.024]	0.028 [0.024]	0.028 [0.024]	0.044* [0.025]	0.018 [0.028]	0.030 [0.024]	0.030 [0.026]	0.119 [0.140]	0.146 [0.092]
Aged 40-49	-0.034 [0.032]	-0.064** [0.029]	-0.036 [0.032]	-0.066** [0.030]	-0.063** [0.029]	-0.031 [0.027]	-0.099*** [0.033]	-0.062** [0.030]	-0.058* [0.033]	-0.261* [0.147]	-0.265** [0.134]
Aged 50 or above	-0.080** [0.038]	-0.112*** [0.036]	-0.083** [0.038]	-0.114*** [0.037]	-0.112*** [0.037]	-0.096*** [0.034]	-0.146*** [0.050]	-0.108*** [0.036]	-0.114*** [0.038]	-0.348 [0.216]	-0.620*** [0.160]
Education											
Lower primary	0.030 [0.151]	0.021 [0.154]	0.037 [0.148]	0.025 [0.151]	0.024 [0.152]	-0.006 [0.113]	0.022 [0.185]	0.031 [0.151]	-0.077 [0.166]	-0.043 [0.534]	0.404 [1.006]
Higher primary	-0.043 [0.168]	-0.053 [0.169]	-0.040 [0.166]	-0.052 [0.167]	-0.052 [0.168]	-0.058 [0.129]	-0.106 [0.174]	-0.050 [0.168]	-0.168 [0.175]	-0.428 [0.604]	0.137 [0.913]
High school	-0.005 [0.147]	-0.028 [0.146]	-0.004 [0.145]	-0.028 [0.145]	-0.027 [0.145]	-0.020 [0.106]	-0.126 [0.154]	-0.029 [0.144]	-0.144 [0.139]	-0.448 [0.519]	0.386 [0.862]
Tertiary	0.068 [0.150]	0.046 [0.150]	0.069 [0.148]	0.047 [0.148]	0.047 [0.149]	0.052 [0.108]	-0.042 [0.169]	0.044 [0.148]	-0.072 [0.158]	-0.351 [0.566]	0.876 [0.862]
Master	0.118 [0.147]	0.102 [0.149]	0.119 [0.145]	0.103 [0.147]	0.104 [0.147]	0.125 [0.099]	0.012 [0.193]	0.095 [0.149]	0.110 [0.149]	-0.328 [0.623]	1.259 [0.955]
Other	0.030 [0.184]	-0.017 [0.182]	0.035 [0.181]	-0.013 [0.179]	-0.019 [0.180]	-0.048 [0.152]	-0.014 [0.226]	-0.022 [0.178]	-0.116 [0.216]	-0.342 [0.860]	0.461 [0.846]
Have mobile	-0.026 [0.033]	-0.027 [0.034]	-0.024 [0.033]	-0.026 [0.034]	-0.027 [0.034]	-0.032 [0.028]	-0.010 [0.051]	-0.036 [0.035]	-0.006 [0.035]	-0.039 [0.201]	-0.189 [0.159]
Commute (minutes)	-0.000 [0.000]	0.000 [0.000]	-0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	-0.000 [0.000]	0.000 [0.000]	0.000 [0.000]	-0.000 [0.000]	-0.001 [0.001]	0.001 [0.002]
No. of children aged 15 below	0.000 [0.006]	0.000 [0.006]	-0.000 [0.006]	0.000 [0.006]	0.000 [0.006]	0.000 [0.005]	0.001 [0.007]	0.000 [0.006]	0.001 [0.006]	0.012 [0.030]	-0.006 [0.030]
Having HIV+ Colleagues × Treated badly	0.044 [0.054]	0.047 [0.052]	0.044 [0.054]	0.047 [0.052]	0.046 [0.052]	0.051 [0.040]	0.035 [0.059]	0.042 [0.052]	0.043 [0.059]	0.361 [0.285]	0.007 [0.256]
× Supported	0.089*** [0.026]	0.082*** [0.026]	0.088*** [0.027]	0.082*** [0.027]	0.082*** [0.027]	0.061*** [0.023]	0.079* [0.043]	0.077*** [0.027]	0.058** [0.027]	0.565*** [0.144]	0.158 [0.109]
× Nothing changed	0.095*** [0.021]	0.095*** [0.022]	0.096*** [0.021]	0.095*** [0.021]	0.093*** [0.021]	0.077*** [0.018]	0.102*** [0.034]	0.092*** [0.021]	0.069*** [0.025]	0.525*** [0.136]	0.331*** [0.095]
× Don t know	0.107*** [0.037]	0.110*** [0.039]	0.105*** [0.037]	0.110*** [0.039]	0.109*** [0.039]	0.096*** [0.034]	0.183*** [0.052]	0.107*** [0.039]	0.115*** [0.041]	0.606*** [0.227]	0.414* [0.226]
Having HIV+ Relative × Treated badly	0.077 [0.052]	0.070 [0.052]	0.078 [0.052]	0.071 [0.052]	0.074 [0.051]	0.048 [0.047]	0.098* [0.058]	0.072 [0.053]	0.052 [0.052]	0.599** [0.281]	0.016 [0.287]
× Supported	0.052*** [0.012]	0.056*** [0.012]	0.051*** [0.012]	0.055*** [0.012]	0.055*** [0.012]	0.041*** [0.013]	0.052** [0.023]	0.053*** [0.012]	0.038** [0.015]	0.316*** [0.059]	0.153** [0.070]
× Nothing changed	0.079*** [0.024]	0.084*** [0.022]	0.077*** [0.024]	0.081*** [0.022]	0.083*** [0.022]	0.071*** [0.021]	0.094*** [0.034]	0.082*** [0.022]	0.062** [0.030]	0.431*** [0.123]	0.278** [0.115]
× Don t know	0.031 [0.048]	0.038 [0.049]	0.032 [0.048]	0.037 [0.049]	0.037 [0.049]	0.028 [0.046]	0.045 [0.067]	0.034 [0.049]	0.021 [0.055]	0.306 [0.242]	0.028 [0.249]
Having HIV+ Neighbours × Treated badly	-0.028 [0.054]	-0.012 [0.054]	-0.025 [0.054]	-0.009 [0.054]	-0.010 [0.054]	-0.009 [0.051]	0.003 [0.073]	-0.005 [0.054]	-0.020 [0.053]	-0.172 [0.284]	0.087 [0.232]
× Supported	-0.043** [0.019]	-0.029 [0.019]	-0.042** [0.019]	-0.029 [0.018]	-0.028 [0.018]	-0.023 [0.016]	-0.032 [0.028]	-0.030 [0.018]	-0.030 [0.018]	-0.140 [0.086]	-0.102 [0.109]
× Nothing changed	-0.040* [0.024]	-0.040 [0.026]	-0.038 [0.024]	-0.038 [0.026]	-0.040 [0.026]	-0.030 [0.022]	-0.031 [0.028]	-0.038 [0.026]	-0.039 [0.029]	-0.226* [0.124]	-0.101 [0.112]
× Don t know	-0.058* [0.030]	-0.044 [0.032]	-0.057* [0.030]	-0.043 [0.032]	-0.044 [0.032]	-0.042* [0.025]	-0.002 [0.039]	-0.043 [0.032]	-0.026 [0.035]	-0.313** [0.156]	-0.081 [0.144]
HIV knowledge (test scores)	0.025*** [0.003]	0.024*** [0.004]	0.025*** [0.003]	0.024*** [0.004]	0.024*** [0.004]	0.020*** [0.003]	0.028*** [0.005]	0.024*** [0.004]	0.022*** [0.004]	0.105*** [0.021]	0.100*** [0.013]
Information leakage									-0.003 [0.003]		
Risky behaviour											
Sex with a person likely infected with HIV							0.032 [0.040]				
STD experience (exluding HIV)							-0.013 [0.017]				
Casual acquaintance in the last sex (ca1)							-0.062 [0.139]				
Casual acquaintance in the 2nd last sex (ca2)							0.233* [0.132]				
ca1 × no codom use							-0.236 [0.187]				
ca2 × no codom use							0.051 [0.354]				
No. of sexual partners in the last 12 mths.							-0.005 [0.005]				
No. of condoms							-0.000 [0.002]				
Area FE	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	4959	4921	4959	4921	4921	5876	3174	4921	3824	4948	4948

Notes: (1) Figures [ ] are standard errors. *** denotes significance at 1%, ** at 5%, and * at 10%. (2) Standard errors are robust to heteroskedasticity and clustered residuals within each working area.