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Key Messages

1. A randomised controlled trial was conducted to compare the efficacy of voluntary counselling and testing (VCT) plus information distribution versus information distribution alone in 300 Chinese male cross-border truck drivers.
2. Two months after the intervention, participants of the VCT intervention group were more likely to be consistent condom users when having sex with female sex workers and non-regular sex partners, were more knowledgeable about HIV, and were less likely to have contracted a sexually transmitted disease in the past 2 months, compared to the controls.
3. Almost all participants of the intervention group were satisfied with the VCT service, and almost 90% agreed that it would increase their chance of using condoms in the future.

Voluntary counselling and testing plus information distribution to reduce HIV-related risk behaviours among Hong Kong male cross-border truck drivers: a randomised controlled study

Introduction

Mobility is a risk factor for the spread of HIV across geographic locations.¹⁻³ Travellers are more likely to practice HIV-related risk behaviours when they are away from home^{4,5} and may become a bridge population transmitting HIV to other populations.¹⁻³ It is hence warranted to provide HIV intervention services to frequent travellers. Cross-border truck drivers are one of the target groups, as they tend to have HIV-related risk behaviours.⁶

In 2010, there were 4832 reported HIV cases in Hong Kong and about 400 new cases per year, 29% of which were attributed to heterosexual transmission,⁷ many of which were suspected to be related to cross-border sexual activities.⁷ Respectively, 9-12% and 11-13% of Hong Kong adult men travelling to mainland China had had sex with a female sex worker (FSW) and a female non-regular sex partner (NRP) during the most recent trip.⁸ A high prevalence of unprotected sex and sexually transmitted diseases have also been reported in this group.⁸ In addition, there are 919 reported HIV/AIDS cases per year in Shenzhen in 2010.⁹ Cross-border HIV prevention needs to be strengthened to keep HIV prevalence low in Hong Kong.

With the advancement of rapid HIV testing tools, voluntary counselling and testing (VCT) becomes an important means of HIV prevention.¹⁰ It can be used for case detection and for reducing risk behaviours.¹⁰ Its effectiveness has been mixed, and there have been few randomised controlled trials.^{11,12} Evidence-based HIV interventions are lacking. Evidence-based randomised controlled trials are important, as is translation of research results into practice. Collaboration with non-governmental organisations and the Department of Health is necessary for HIV prevention.

Methods

This study was conducted from November 2004 to March 2006. During 2005 and 2006, a randomised controlled trial was carried out to compare the efficacy of VCT plus information distribution versus information distribution alone.

With informed consent, more than 2000 cross-border truck drivers were screened in a cafe (rest area) of the checkpoint while waiting for custom clearance. Of them, 320 were eligible to join the study. They were 18+ years old, self-reported to have had sexual intercourse with either a FSW or a NRP (who was not a FSW, spouse, or girlfriend) in mainland China in the past 12 months. A total of 300 participants were randomised into the intervention group (VCT plus information distribution) or the control group (information distribution alone). The intervention group was given a 30-45 minute VCT intervention, which included the HIV rapid screening test and pre- and post-test counselling. None of the participants tested HIV positive. The primary outcome measures were consistent (every time) condom use during sexual activity with FSW and NRP

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in mainland China over a 2-month post-intervention period. Anonymous surveys were conducted before randomisation (baseline) and at month 2, using a computer-assisted interviewing method to reduce bias.^{8,13} Absolute and relative risk reduction statistics and their 95% confidence intervals were used to assess treatment effects.¹⁴

Results

The results have been published in full in *AIDS Care*.¹⁵ Baseline statistics were not significantly different between the intervention and control groups. At baseline, only about two-thirds of the participants of both groups consistently used condoms during sexual activity with a FSW in mainland China in the past 2 months, and about 30% did so with their NRP.¹⁵ At month 2, participants of the intervention group were more likely to be consistent condom users when having sex with a FSW and NRP, were more knowledgeable about HIV, and were less likely to have contracted sexually transmitted diseases in the past 2 months.¹⁵ Almost all participants of the intervention group were satisfied with the VCT service, and about 90% agreed that it would increase their chance of using condoms in the future.¹⁵

Discussion

Our target population was at high risk of HIV/STD infection as the prevalence of consistent condom use was low (especially when having sex with a NRP), and the incidence of self-reported sexually transmitted diseases among the controls and within the 2-month post-intervention period was quite high. The results of this study were disseminated to HIV workers and funders in Hong Kong, and one non-governmental organisation successfully applied funding using our findings and implemented an up-scaled VCT service.

This study exemplifies how public health research can be translated into real intervention programmes. Our role as academics is to provide feasible, innovative, and evidence-based models, which can be implemented in a sustainable manner by health organisations or the government. During the research process, it was important to involve non-governmental organisations, the truck drivers' associations and their community leaders, the checkpoint officials, the owner of the cafe (rest area), and the laboratory of the Department of Health in order to provide diagnostic services for positively screened results, if any. We used the healthy setting approach¹⁶ to access the target group at a place that they gather and have time to take up the VCT.

HIV detection is very important for its treatment and control. Some health authorities suggest that HIV antibody testing should be simplified and the counselling component should be reduced or even removed on the grounds that VCT is ineffective in changing risk behaviours.¹⁷ Our studies showed that VCT is effective in reducing risk behaviours,

although the follow-up period was short and the sample size was moderate. Further large-scale studies are warranted.

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