

# Factors influencing the acceptability of HIV/AIDS voluntary counselling and testing: a quantitative study of 41 336 female university students in China

Haixu Liang<sup>A</sup>, Kun Tang<sup>B,I</sup>, Wenzhen Cao<sup>C</sup>, Yueping Guo<sup>D</sup>, Yang Jiao<sup>E</sup>,  
Wenyuan Zhu<sup>F</sup>, Yutong Wang<sup>G</sup> and Haibin Wang<sup>H,I</sup>

<sup>A</sup>Baotou Medical College, Inner Mongolia University of Science and Technology, Baotou 014040, China.

<sup>B</sup>Vanke School of Public Health, Tsinghua University, Beijing 100084, China.

<sup>C</sup>Department of Information Management, Peking University, Beijing 100871, China.

<sup>D</sup>Graduate School of Chinese Academy of Social Science, Beijing 102488, China.

<sup>E</sup>Chaoyang District Center for Disease Control and Prevention of Beijing, Beijing 100020, China.

<sup>F</sup>Peking University, Beijing 100871, China.

<sup>G</sup>Hebei Medical University, Shijiazhuang 050000, China.

<sup>H</sup>Chaoyang District Center for Disease Control and Prevention of Beijing, Beijing 100020, China.

<sup>I</sup>Corresponding authors. Emails: tangkun1215@163.com; wanghb811@163.com.

**Abstract.** This study shows that there is a huge gap between young females' willingness and practice of accepting voluntary counselling and testing (VCT). Only 2.16% (894/41 336) of the participants have had HIV/AIDS tests. The study identified age, education major, confidentiality, attitude, accuracy, self-assessment and expense as major factors associated with young female people's acceptance of VCT in China. Therefore, in order to promote HIV VCT among young females, it is necessary for future programs to be sensitive to the targeted population's needs.

**Keywords:** Asia, China, epidemiology, HIV/AIDS, HIV prevention, HIV testing, self-assessment, university students, voluntary counselling and testing.

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Dear Editor,

We read the recent report by Giles *et al.* in *Sexual Health*, which analyses the clinical management of HIV-positive women in Australia.<sup>1</sup> Our study shows that, in China, there is a huge gap between young female student's willingness and practice of accepting voluntary counselling and testing (VCT) and the rate of utilising VCT, which is low. Most students think that VCT should be confidential because they are worried about being associated with sexual promiscuity and misunderstood by others. Thus, it is essential to popularise relevant knowledge, to educate people about the importance of the test and provide youth-friendly VCT services.

Young women are more vulnerable to HIV/AIDS infection than young men, but this statistic has not received sufficient attention.<sup>2</sup> According to global data,<sup>2,3</sup> ~1.7 million people worldwide were newly infected with HIV/AIDS in 2018, and 6200 adolescent girls and young women, aged 15–24 years, are infected with HIV/AIDS every week. The VCT integrates HIV/AIDS testing, education and promotion and the reduction of high-risk behaviours. It is an important step

towards improving understanding of HIV/AIDS detection among young female students. This study aimed to examine the current situation of young female student's acceptance of VCT in China and to analyse the hindering and facilitating factors associated with young female student's practice.

A national Internet-based self-administered questionnaire survey was conducted in 2018 among 222 colleges and universities in China. The survey used multi-stage sampling to select participants at a college and university level. The process undertaken was as follows: there was a need to balance the number of participants from eastern, central, and western parts of China based on the population density; the survey was then distributed to college students through contact points or contacts at the colleges and universities; convenience sampling was then adopted to recruit a voluntary response sample. The students used their discretion as to whether they wanted to participate in the survey. The questionnaire collected demographic characteristics of female young students, needs of the VCT service, access to VCT, considerations regarding VCT and self-assessment of HIV/AIDS infection risk. A total

of 41 336 valid respondents were recruited, whose average age was  $18.82 \pm \text{s.d. } 1.31$  years. Overall, 59.15% (24 452/41 336) of young female student participants were willing to accept VCT; however, only 2.16% (894/41 336) had taken HIV/AIDS tests (Table 1). According to the results of the open-ended questions in the questionnaire, the main reason for the female university students to receive HIV testing is that they have had sex, and they have anxiety about the potential sexual health problems, and they accounted for 50.99% (103/202). Of the 894 young female students who had taken HIV/AIDS tests, negative test results accounted for 47.09% (421/894); 3.36% (30/894) were positive and 46.55% (421/894) had an unknown result. The data indicated that nearly half of the respondents were unaware of their infection status even after the HIV/AIDS tests. According to the open-ended questions, a total of 275 (43.21%) students were reluctant to know whether

they were infected with HIV for fear of disclosure and reproach. At the same time, they also felt fear, shame and avoidance. This suggested that while expanding the coverage of HIV/AIDS tests, we should also inform the clients of their test results in more convenient, covert and independent ways.

The most preferred place for young female students in China to accept VCT was Centers for Disease Control and Prevention (31.44%), whereas the peer education club at the school campus (2.86%) was less preferred. The organising methods and the consultants of VCT brought significant influence to young female student's willingness to accept VCT.<sup>4</sup> This study showed that the most concerned factors of VCT acceptance were the accuracy (59.16%) and the confidentiality (24.62%) of the test result. HIV/AIDS remains a highly stigmatised illness in China. The mutual

**Table 1. Comparisons of the willingness to accept VCT among young female students**

Characteristics	<i>n</i> (%)
Education level	
Junior College or below	25 349 (61.32)
Undergraduate	15 812 (38.25)
Graduate or Postgraduate	175 (0.42)
Have you ever had any tests for HIV/AIDS?	
Yes	894 (2.16)
No	40 442 (97.84)
Result of HIV/AIDS test	
HIV–	421 (47.09)
HIV+	30 (3.36)
I do not know	443 (49.55)
Preferred place to have an HIV/AIDS test	
The peer education clubs in school	1181 (2.86)
On-campus hospital	2917 (7.06)
Off-campus hospital	12 649 (30.60)
Centers for Disease Control and Prevention/Epidemic Prevention Center (CDC)	12 997 (31.44)
Outpatient service for sexually transmissible diseases	3994 (9.66)
Maternal and Child Health Center	2618 (6.33)
Blood Bank/Mobile vehicles for blood donation	634 (1.53)
Buy a diagnostic kit for HIV	3095 (7.49)
Social welfare organisations or groups	551 (1.33)
Other	700 (1.69)
Primary considerations before having an HIV/AIDS test	
Expenditure	4227 (10.23)
Confidentiality	10 175 (24.62)
Doctors' attitude	753 (1.82)
Accuracy of the test	24 456 (59.16)
Distance	523 (1.27)
Time needed	692 (1.67)
Other	510 (1.23)
Ways to promote HIV/AIDS test <sup>A</sup>	
Popularising relevant knowledge, promoting the importance of the test	37 294 (62.71)
Anonymous test, emphasising the principle of security and confidentiality	25 624 (43.09)
Making it free or making the price low	17 437 (29.32)
Shorten the testing time, getting the result as soon as possible	13 595 (22.86)
The service of medical personnel	17 231 (28.97)
Providing the treatment and care services for AIDS/sexually transmissible diseases	23 318 (39.21)
Other	434 (0.73)
Are you willing to accept an on-the-spot VCT test?	
Yes	24 452 (59.15)
No	16 884 (40.85)

<sup>A</sup>Multiple choices.

trust between the consultants and the clients, and the empathy towards clients help promote people's willingness to accept VCT. Coordination between health institution and the school is encouraged to optimise the arrangements of VCT outpatient services, and provide schools with HIV/AIDS counselling, testing, psychological support and other technical supports and services regarding prevention and control.<sup>5</sup>

These results demonstrate that young female students have the willingness to accept VCT, but they generally underestimate their risk of HIV/AIDS infection leading to a low actual participation rate. It is necessary to strengthen the public communication and education activities about VCT among young students, especially for those who have experienced sex, and institutions should strengthen the construction of youth-friendly services.

### Conflicts of interest

The authors declare that they have no conflicts of interest.

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