The Survey of HIV/AIDS Related Knowledge, Attitude and Behaviour among Migrant Peasant Workers in Middle City in China

J Li[1], X Hu[1], D Luo[2], L Xu[2], X Chen[1], X Li[1], D Jian[1], M Yi[1], H Xie[1]

ABSTRACT

Objectives: *To explore HIV/AIDS related knowledge, attitude and behaviour among migrant peasant workers in Changsha, which is a inland city in central China, and to provide evidence that educating this population may help to prevent the spread of HIV/AIDS in China.*
Methods: *A total of 1782 migrant peasant workers participated in the study. A questionnaire was used to determine their knowledge of HIV/AIDS and related attitude and behaviour items.*
Results: *The majority of the respondents had a rather low level of overall HIV/AIDS knowledge and its prevention, had what constituted risky behaviour in this regard and a generally low acceptance of HIV-infected persons. Furthermore, their behaviour and attitude were analysed with respect to their educational level, occupational class and score of HIV/AIDS related knowledge.*
Conclusions: *The results of this investigation will help healthcare professionals develop a sensitive and specific educational programme for migrant peasant workers. Educating this population will be a very important aspect of HIV/AIDS prevention in China.*

Key words: Attitude, behaviour, HIV/AIDS, knowledge, migrant peasant worker

Encuesta de Conocimientos, Actitudes, y Comportamientos en Relación con el VIH/SIDA entre los Trabajadores Campesinos Migratorios de la Ciudad Media en China

J Li[1], X Hu[1], D Luo[2], L Xu[2], X Chen[1], X Li[1], D Jian[1], M Yi[1], H Xie[1]

RESUMEN

Objetivos: *Explorar los conocimientos, las actitudes, y el comportamiento en relación con el VIH/SIDA, entre los trabajadores campesinos migratorios en Changsha – una ciudad del interior en China central – y proporcionar evidencias en cuanto al hecho de que educar a esta población puede ayudar a prevenir la diseminación del VIH/SIDA en China.*
Métodos: *Un total de 1782 trabajadores campesinos migratorios participó en el estudio.*
Se usó un cuestionario a fin de determinar sus conocimientos sobre el VIH/SIDA, así como aspectos relacionados con la actitud y el comportamiento hacia este último.
Resultados: *La mayoría de los encuestados tenían un nivel bastante bajo de conocimientos generales sobre el VIH/SIDA y su prevención, poseían lo que pueden considerarse como una conducta riesgosa al respecto, y manifestaban una aceptación generalmente baja de las personas infectadas con el VIH. Además, se analizaron su comportamiento y actitud con respecto a su nivel educacional, clase ocupacional y puntuación en cuanto a conocimientos en relación con el VIH/SIDA.*
Conclusiones: *Los resultados de esta investigación ayudarán a los profesionales de la salud a desarrollar un programa educativo sensible y específico para los trabajadores campesinos migratorios. Educar a esta población será un aspecto muy importante para la prevención del VIH/SIDA en China.*

Note: J Li and X Hu contributed equally to this work.

From: [1]Department of Dermatology, XiangYa Hospital, Central South University, Changsha, Hunan, China and [2]Department of Public Health, XiangYa School of Medicine, Central South University, Changsha, Hunan, China.

Correspondence: Hongfu Xie, Department of Dermatology, XiangYa Hospital, Central South University, XiangYa Road, Changsha, Hunan, 410008, China. Email: xiehongfu@tom.com

Palabras claves: Actitud, comportamiento, VIH/SIDA, conocimiento, trabajador campesino migratorio

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INTRODUCTION

Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) are complex health problems of the 21st century. Recent epidemiological data indicate that an estimated 33.2 million people worldwide were living with HIV at the end of 2007 (1).

Since the first reported AIDS case in 1985, the number of HIV-infected persons increased sharply in recent years in China. In the absence of effective preventive measures, it was predicted that 10 million Chinese people would be infected by 2010 (2). Recent epidemiological data indicate that an estimated 700 000 people were living with HIV/AIDS in China at the end of 2007 (3). The Chinese government has acknowledged a rapid rise in HIV incidence and has made a commitment to step up both treatment and prevention efforts (4). From 2004, the prevention and control of AIDS was treated as a matter of high importance in a State Council document. Funding from the central government for HIV/AIDS prevention, treatment and care has risen to 800 million Ren Min Bi (RMB) annually (5).

Population migration is a most important factor contributing to HIV spread. In many countries, the HIV infection rate is elevated in high density populations and in regions bordering other countries (6, 7). In China, HIV/AIDS was found to be elevated in migrant populations. The Ministry of Health of the People's Republic of China (PRC) publicly proclaimed in 1996 that "the 80–120 million people in the 'floating population' who moved throughout the country in search of work carry the HIV virus into China's population centres" (8). Many of China's HIV-infected population are believed to be among the nation's 100 million rural to urban migrants (9).

The migrant peasant workers, who are away from their communities, families and spouses in rural areas for long, are sexually active. They are highly mobile and they frequently follow high-risk behaviours such as using illicit drugs, illegally selling blood and frequenting sex-workers. So the "migrant peasant worker" is one of the most important channels for the transmission of AIDS. Rapid economic growth in China has resulted in an increase in their numbers. At the same time, they have little knowledge about sexually transmitted diseases and find themselves unable to obtain useful information, consultation and healthcare services pertaining to HIV/AIDS. Their social support also is minimal. Hence, this group presents a special challenge for diagnosis and treatment (10).

Areas differing in economic status and social environment show uncommon characteristics about HIV/AIDS. Changsha is an inland central city which is thought to be different from developed districts in southeast China along the coast and the poverty stricken areas in western China. It is a developing city and believed to be representative of central China, as an advantaged geographical locale with expedient traffic and a developed information resource. The locations for entertainment in the city are rather developed. As opposed to cities in western and southern China, service and entertainment are the main industries in Changsha. Real estate construction and the accompanying infrastructure are developing at a rapid pace which require a large number of workers who come from many areas to fill these open positions.

In order to implement a programme of HIV/AIDS prevention, a random sample was used to investigate HIV/AIDS related knowledge and high risk behaviours in migrant peasant workers in Changsha city.

SUBJECTS AND METHODS

The questionnaire utilized in this survey was based on the WHO guidelines and redesigned by experts to assess the special situation in Changsha. It contained two broad sections: (1) HIV/AIDS – related knowledge; (2) HIV/AIDS – related attitude and behaviour.

The investigator met with respondents and explained to them the purpose of the study, the confidentiality of the information and the fact that participation was voluntary. After respondents filled out the questionnaires, investigators immediately reclaimed them. The data were analysed by using the statistical package for social sciences (SPSS) version 11.5. The methods of analysis included descriptive study and multiple linear regression.

A random sample of 1782 migrant peasant workers who had stayed in Changsha over six months and came from eight construction sites and some hotels were selected.

RESULTS

1. *Sociodemographic Characteristics of Respondents*
   The sociodemographic characteristics of 1782 migrant peasant worker respondents are presented in Table 1.
2. *Related knowledge of HIV/AIDS*
3. *Related attitude towards HIV/AIDS*

Respondent knowledge of HIV/AIDS is minimal (Table. 2). The Behaviour and attitudes (Table 3) towards HIV/AIDS correlated with educational level, occupational class and levels of HIV/AIDS− related knowledge.

4. *Behaviour relating to the spread and prevention of HIV/AIDS*

4.1. *The frequency of unprotected sexual intercourse and using condoms*

Among all respondents, 14.0% of them refused to answer, 47.3% of them denied having sex but 29.3% of them admitted having occasional sexual relations, 4.9% of respon-

Table 1: The sociodemographic characteristics of respondents

Sociodemographic characteristics	Attendant (n = 597)		Sex -worker (n = 513)		Construction worker (n = 672)		Sum (n = 1782)	
	frequency	%	frequency	%	frequency	%	frequency	%
Gender								
male	237	39.7	3	0.6	642	95.5	882	49.5
female	360	60.3	510	99.4	30	4.5	900	50.5
Age (Yrs)								
16–20	276	46.2	180	35.1	51	7.6	507	28.5
21–30	264	44.2	321	62.6	240	35.7	855	46.3
31–40	45	7.5	9	1.8	234	34.8	288	16.2
> 40	9	1.5	21	0.6	147	21.9	177	8.9
Absent	3	0.5	0	0.0	0	0.0	3	0.2
Marriage								
unmarried	435	72.9	411	80.1	147	21.9	993	55.7
married	135	22.6	84	16.4	372	55.4	591	33.2
divorced	18	3.0	15	2.9	132	19.6	165	9.3
Loss spouse	9	1.5	3	0.6	15	2.2	27	1.5
Absent	0	0.0	0	0	6	0.9	6	0.3
Educational Level								
Primary school	18	3.0	24	4.7	90	13.4	132	7.4
Junior high school	234	39.2	255	49.7	336	50.0	825	46.3
High school	315	52.8	222	43.3	201	29.9	738	41.4
University	30	5.0	12	2.3	45	6.7	87	4.9
Work time ≤6 month	192	32.2	168	32.7	267	39.7	627	35.2
≤ 1 year	132	22.1	138	26.9	177	26.3	447	25.1
≤ 2 year	75	12.6	87	17.0	60	8.9	222	12.5
≤ 2 year	195	32.7	120	23.4	168	25.0	483	27.1
Absent	3	0.5	0	0.0	0	0.0	3	0.2

Table 2: Percentages of HIV/AIDS knowledge questions

	Knowledge	Yes	No	Unclear	Absent
1	Virus cause HIV/AIDS with infectivity	73.2	9.1	17.2	0.5
2	HIV/AIDS could be prevented	86.0	5.7	8.1	0.2
3	HIV/AIDS lead to death	78.1	5.7	16.2	0.0
4	HIV/AIDS could be fully cured	15.3	53.9	30.8	0.0
5	Use condom to decrease the AIDS morbidity	72.1	9.3	18.5	0.2
6	HIV/AIDS diagnosis mode of transmission	17.8	50.0	32.2	0.0
7	Blood transfusion	90.4	4.9	4.7	0.0
8	Sharing needles to inject drugs	87.9	6.1	6.1	0.0
9	Sexual intercourse	90.4	3.7	5.9	0.0
10	Kiss	36.9	47.1	15.7	0.3
11	Hugging and shaking hands	9.4	73.6	16.8	0.2
12	Insect stings	50.8	31.5	17.7	0.0
13	Delivery (birth)	71.0	10.4	18.0	0.3
14	Breast feeding	55.9	21.2	22.9	0.0
15	Sharing razor	38.2	37.5	23.9	0.3
16	Sharing tattoo needles	51.5	25.6	22.6	0.3

Table 3: Percentages of HIV/AIDS attitude questions

	Attitude	Yes	No	Unclear	Absent
1	HIV/AIDS is scary	78.8	14.2	6.7	0.3
2	HIV person could marry	18.0	59.6	21.7	0.7
3	Contact with people who were diagnosed as HIV/AIDS?	35.4	37.7	25.8	1.1

dents had sex every week while 4.5% of the respondents had sex every month.

Of those who admitted to having had sexual intercourse, only 417 respondents answered the question about the frequency of using condoms. There were 31.7% of them who never used condoms while 36% used them now and then; 15.1% of them usually used condoms but discontinued the practice and 15.1% of them used condoms every time.

4.2. *Intraveneous drug use and sharing needles*

Those who answered the questions regarding intravenous drug use were 1245 individuals (69.9%). Among them, 1 200 individuals (96.4%) claimed not have used intravenous drugs. Only 45 individuals (3.6%) admitted intravenous drug use. Of those, 36 individuals (80%) denied sharing needles with others, 6 individuals (13.3%) reported sharing needles now and then and 3 individuals (16.7%) admitted practising it routinely, but none of those who shared needles with others reported doing this every time.

4.3. The habit of sharing razors and nail clippers

There were 1263 individuals (70.9%) who answered the question on sharing razors nd nail clippers with other people and 24.7% had the habit of sharing.

4.4. Fear of venereal diseases and of visiting a doctor

Among the 1260 (70.7%) individuals who answered questions about dealing with venereal disease, 17.4% were anxious about these diseases; 183 of these individuals (83.6%) said that they had seen a doctor to check their sexual health but 36 individuals (16.4%) refused to see a doctor.

Of those who did not see a doctor, 27 individuals gave various reasons: shyness was chosen 15 times (50%), too expensive to see a doctor – six times (20%), other reasons – nine times (30%). Nobody indicated fear that a doctor might inform a policeman or family member.

4.5. The channels for acquiring related HIV/AIDS knowledge

There were 573 individuals who did not answer questions related to the channels of acquiring HIV/AIDS knowledge. Those who answered the question seemed to know about the available resources. The following channels for obtaining information were given: TV (876 times, 27.6%), internet (525 times, 16.6%), school (168 times, 5.3%), journalisms (870 times, 27.4%) or magazines (870 times, 27.4%), talk with friends and colleagues (309 times, 9.7%), learn from lecture (135 times, 4.3%) and other methods (288 times, 9.1%).

5. The correlation of HIV/AIDS related knowledge with socio-economic status and educational background

The score of HIV/AIDS knowledge was the dependent variable. Gender, age, marriage, educational level and occupational class were independent variables, using stepwise regression analysis for the multiple linear regression. The standard of entrance and rejection was: $\alpha_{in} = 0.05$, $\alpha_{out} = 0.10$. The related HIV/AIDS knowledge had a linear relationship with educational level and marital status. But the influence of educational level was more significant than that of marriage (Table 4).

Table 4: Multiple linear regression of HIV/AIDS related knowledge(n = 1782)

Variable	b	Sb	b'	t	*P*
Constant	7.820	0.443		17.638	< 0.001
Educational level	0.707	0.179	0.165	3.963	< 0.001
Marriage	0.0008	0.000	0.115	-2.779	0.006

6. The correlation of HIV/AIDS related attitude with gender, age, marital status, educational level, socio-economic status and knowledge of HIV/AIDS

6.1. Whether or not HIV/AIDS is scary

The answer to this question was the dependent variable which was encoded into two kinds: scary and not scary/unclear. Gender, age, marriage, educational level, occupational class, score of HIV/AIDS related knowledge were independent variables using the stepwise regression analysis for the multiple linear regression of it ($\alpha_{in} = 0.10$, $\alpha_{out} = 0.15$) [Table. 5]. Sex-workers were 3.275 times more likely to think that HIV/AIDS was scary compared to construction workers (OR95% CI**:** 1.797, 5.966).

Table 5: Multiple linear regression of whether or not HIV/AIDS is scary (n = 1782)

Variable	b	Sb	Wald	*P*	OR (OR95%CI)
Constant	0.452	0.325	1.930	0.165	1.571
construction workers			15.925	< 0.001	
attendants	0.098	0.226	0.187	0.665	1.103 (0.708, 1.718)
Sex-workers	1.186	0.306	15.024	< 0.001	3.275 (1.797, 5.966)

6.2. Whether or not a HIV-infected person (or their infector) could marry

The answer to this was the dependent variable which was encoded into two kinds, no and yes/unclear. Gender, age, marriage, educational level, occupational class, score of related knowledge were independent variables, using the back-

ward-stepwise regression analysed by the logistic regression of this question (α_{in}= 0.10, α_{out}= 0.15).

The level of education and knowledge of HIV/AIDS influenced the attitude of respondents to this question. As the level of education increased, the possibility of "couldn't marry" was decreased (OR = 0.731). But the possibility of "couldn't marry" was increased while the score of related knowledge was increased (OR = 1.150).

6.3. Would you have contact with a HIV-infected person

We analysed the logistic regression of it with backward-stepwise regression (α_{in} = 0.10, α_{out} = 0.15), there were no statistical significance between people of different socio-demographic trait and of having different related knowledge.

7. The multiplicity of HIV/AIDS related behaviour

7.1. The unprotected sexual behaviour

Unprotected sexual behaviour was the dependent variable. Gender, age, marriage, education, occupational class, score of related knowledge and work time were independent variables. Ordinal regression was used to analyse this point (α_{in} = 0.05, α_{out} = 0.10). The likelihood of unprotected sexual behaviour among attendants was 2.662 times (OR 95% CI: 1.415, 5.002) that of migrant peasant workers. With increasing of one item of related knowledge, the likelihood of unprotected sexual behaviour increasing one grade was 1.092 (OR 95% CI**:** 1.014, 1.175). And the likelihood of unprotected sexual behaviour increasing one level was 1.269 (OR 95% CI**:** 1.067, 1.510) with increasing grade of work time.

7.2. Intravenous drug use

Using backward-stepwise regression analysis (α_{in} = 0.10, α_{out} = 0.15), there was no statistical significance between people of different sociodemographic characteristics and different related knowledge.

7.3. The habit of sharing razors and nail clippers

Sharing these items was the dependent variable. Gender, age, marriage, educational level, occupational class and score of related knowledge were independent variables, analysed *via* the logistic regression using backward-stepwise regression (α_{in} = 0.10, α_{out} = 0.15). The risk of this habit in attendants was 1.547 times (OR 95% CI: 0.869, 2.754) that in the migrant peasant workers. The likelihood of it increased gradually with increased age. 1.430 times (OR 95% CI: 1.012, 2.021). Comparing unmarried individuals, the likelihood decreased among divorced and those who lost a spouse (OR = 0.128, 0.087). The likelihood increased gradually with increased related knowledge (OR = 1.087).

7.4. Fear of venereal diseases

Fear of venereal disease was the dependent variable. Gender, age, marriage, educational level, occupational class, score of related knowledge were independent variables, analysed *via* the logistic regression using backward-stepwise regression (α_{in} = 0.10, α_{out} = 0.15). The likelihood of this in attendants was 2.538 times (OR 95% CI: 1.212, 5.312) in the migrant peasant workers. The likelihood of the behaviour increased gradually with increased age 1.613 times (OR 95% CI**:** 1.179, 2.255).

DISCUSSION

Since HIV/AIDS emerged in China, a number of studies have been done to identify populations at risk. The subjects of these studies often were sex-workers (11), students (12), migrant populations (13) and general residents (14). Only a few studies were about the migrant peasant workers. These early investigations were largely carried out at construction sites in eastern China (15) and in northwest China (16). The migrant peasant workers, who were away from their communities, families and spouses in rural areas for long periods of time, usually work as construction workers, attendants or sex-workers. Hence, this study was concentrated on this population.

This study shows that the knowledge of HIV/AIDS is minimal. The behaviour and attitudes toward HIV/AIDS prevention and infected individuals correlated with educational level, occupational class and level of HIV/AIDS related knowledge. Many participants in the study had little or no knowledge of how to prevent HIV/AIDS. Some thought that using a condom was an effective means of disease control. This belief was especially found among those who admitted to risky behaviour. These high risk behaviours include having unprotected sex, use of condom irregularly, sharing razors and nail clippers and sharing needles for drug abuse. This population relies heavily on the TV, internet, journalism and magazines as their sources of information on HIV/AIDS. This is different for university students who have a rather high level of knowledge about HIV/AIDS (12) and get enough information or consultation about HIV/AIDS from multiple avenues (17).

The high mobility of the sexually active migrant peasant work force makes them a high priority target for HIV/AIDS prevention as they may directly influence the epidemic of HIV/AIDS in China. Because the population dwells in clusters, their behaviour becomes important to the spread of HIV/AIDS. The government has underscored the importance of effective HIV/AIDS prevention in this vulnerable population.

They have different characteristics and come from different surroundings. Different populations have different levels of related knowledge and requirements for HIV/AIDS prevention, treatment and care. The migrant peasant workers in this study had little HIV/AIDS related knowledge and cannot garner enough information, consultation nor health-care service. The social support is inadequate. Essentially there has not been a systematic HIV prevention effort among this population. So the education and prevention of

HIV/AIDS for migrant peasant workers is of paramount importance.

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