Evolution of HIV knowledge in China: Has China succeeded in empowering people with better knowledge about HIV/AIDS?

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Extended Abstract

Motivation for the Paper

HIV prevalence in China is currently 0.1% among adults[1], but due to the large population even this small prevalence translates into a large number of people – 700,000 people were estimated to be living with HIV in China at the end of 2007[2]. The absolute number of people living with HIV/AIDS is growing and moving beyond high-risk groups to the general population. The sexual route of HIV transmission is becoming the predominant one. Commercial sex work is more widespread and sexual behaviour is changing in the country with risky sexual behaviours becoming more prevalent than they used to be in the past[3]. Given the limited scope of any potential cure for HIV, HIV prevention can play a crucial role in controlling the epidemic. Ensuring adequate knowledge is important for the successful prevention of HIV as detailed knowledge may effectively help reduce risky behaviours due to the fact that HIV knowledge is one of the main components (although not a sufficient one) of the HIV risk reduction behaviour framework, information – motivation – behavioural skills model, introduced by Fisher and Fisher in 1992[4]. According to Fisher and Fisher (1992)[5] and Ingham (1995)[6], HIV knowledge is an important pre-requisite for risk reduction behaviour. In 2003, the Chinese government finally reacted to the evidence of spread of HIV in China and announced that the country is grappling with a possible HIV epidemic outbreak. Since that time a large number of educational campaigns and programmes were introduced in the country. No previous studies have looked at the development of HIV knowledge in general population and across population sub-groups in China or compared the effectiveness of educational campaigns in China with other countries.

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[1] http://www.unaids.org/en/CountryResponses/Countries/China.asp [Accessed 14 September 2008]
[2] http://www.unaids.org/en/CountryResponses/Countries/China.asp [Accessed 14 September 2008]
[3] Parish, W. L., Laumann E.O., Mojola S.A. (2007). "Sexual Behavior in China: Trends and Comparisons." *Population and Development Review* 33(4): 729-756.
[4] Fisher, J. D. and Fisher,W. A. (1992). "Changing AIDS-risk behavior." *Psychological Bulletin* 111(3): 455-474.
[5] Fisher, J. D. and Fisher,W. A. (1992). "Changing AIDS-risk behavior." *Psychological Bulletin* 111(3): 455-474.
[6] Ingham, R. (1995). AIDS: Knowledge, Awareness and Attitudes. In: *Sexual Behavour and AIDS in the Developing World*, pp. 43-74. Edited by J. Cleland & B. Ferry. London: Taylor and Francis.

This paper focuses on development of HIV knowledge among women in the Chinese context and on the effectiveness of educational campaigns in China. The aim of this paper is to compare the levels of HIV knowledge at various points in time between 1997 and 2006 in China and then to compare HIV knowledge in China with the levels of HIV knowledge in three other countries: Kenya, India and Moldova. Kenya is a high prevalence (around 8%) country[7] with a long history of educational interventions and campaigns, India is a country with a comparable to China HIV prevalence (0.3%)[8] and with a large population at HIV risk due to the size of the population in the country, Moldova is a country with slightly higher HIV prevalence (1.1%)[9], smaller number of people living with HIV due to the smaller size of the country but comparable to China educational system which is a heritage from the Former Soviet Union. For the analysis, we use data from the China National Family Planning and Reproductive Health Surveys 1997, 2001 and 2006, India DHS 2006, Moldova DHS 2005, and Kenya DHS 2003. This analysis will help to determine factors which are associated with the adequate level of HIV knowledge across times in China and in different countries. It will also help to put these results into the broader context of the selected countries' political and educational systems in order to be able to compare levels of effectiveness of educational campaigns in different parts of the worlds and to suggest macro environments for the successful HIV education. Results will have important policy implications for China and for other countries in the world and will also suggest lessons for more effective HIV prevention and educational campaigns.

Structure of the Analysis

HIV knowledge can be divided into the two main parts: HIV prevention knowledge and knowledge about HIV/AIDS misconceptions. HIV prevention knowledge might potentially help to change behaviour (as mentioned earlier) and to protect individuals from acquiring HIV/AIDS and from spreading HIV/AIDS further. Knowledge about HIV/AIDS misconceptions is essential in order to have a positive and non-discriminatory attitude towards people who are living with HIV.

The datasets included into the current analysis contain questions on both types of HIV knowledge. In order to assess the level of HIV knowledge in China and other selected countries, two scores for measuring HIV knowledge were created. The first score was created to measure HIV prevention knowledge and included four correct routes of HIV transmission (blood transfusion, sharing needles, mother to child transmission and sexual transmission). The second score was created to measure knowledge about HIV/AIDS misconceptions. In order to enable comparison across times for China and

[7] http://www.unaids.org/en/CountryResponses/Countries/kenya.asp [Accessed 14 September 2008]
[8] http://www.unaids.org/en/CountryResponses/Countries/india.asp [Accessed 14 September 2008]
[9] http://www.unicef.org/infobycountry/moldova_statistics.html [Accessed 14 September 2008]

across countries, three routes of transmissions were included into the second score of HIV knowledge. These three routes give good coverage from simple interactions between people (handshaking) to more close daily contact (sharing utensils) to personal contact (kissing).

Descriptive analysis of the two types of HIV knowledge in four countries will be conducted followed by the ordinal logistic regression modelling of the two types of HIV knowledge in China across times, as well as in Kenya, Moldova and India to identify factors which are associated with the adequate HIV knowledge in these four countries. The results of the modelling will then be compared across countries and will be discussed in the political, economic and educational contexts of the four countries.

The Kenyan, Moldovan and Indian DHS data as well as Chinese data have a hierarchical structure. At the top level there are clusters (communities), within clusters (communities) is a sample of households, and within households is a sample of women. In order to take this hierarchical structure into the account, a multilevel analysis will be applied, otherwise potential household and/or community effects will not be taken into account and standard errors will be underestimated.

Preliminary Results of the Analysis

Preliminary descriptive analysis of the two types of HIV knowledge were conducted for China 1997 and 2001 and Kenya 2003 datasets, the results of these analysis are presented in Figures 1 and 2.

Figure 1: HIV Knowledge – Correct Routes of HIV Transmission

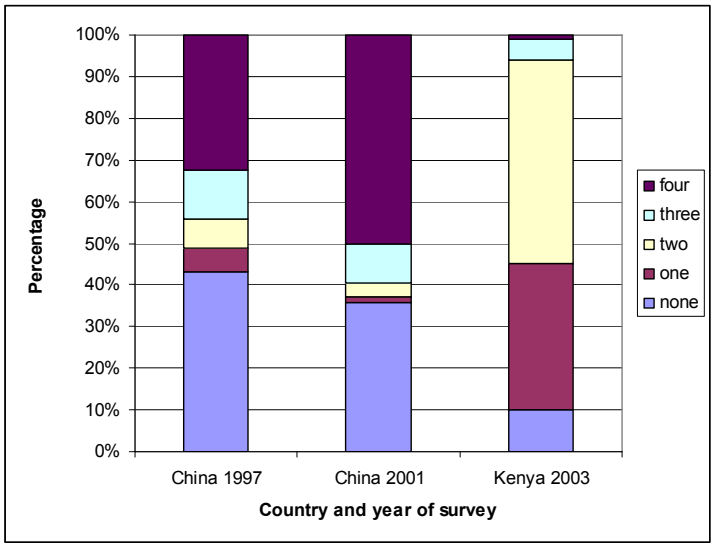

Figure 1 suggests that there are small proportions of women with either none or four correct routes of HIV transmission in Kenya when compared to China. In Kenya there are more women who have knowledge of one or two correct routes of HIV transmission than women who either do not know anything or who have perfect knowledge on HIV/AIDS. It is important to mention that in China even in

2001 before the official recognition of the problem by the Chinese government there was already a large proportion of women who knew all four correct routes of HIV transmission, therefore we expect that in 2006 the level of knowledge of correct routes of HIV transmission will be even higher. The differences in the level of HIV knowledge about correct routes of transmission might be attributed to the level of literacy and to the access to education in China when compared to Kenya.

Figure 2: HIV Knowledge about Misconceptions

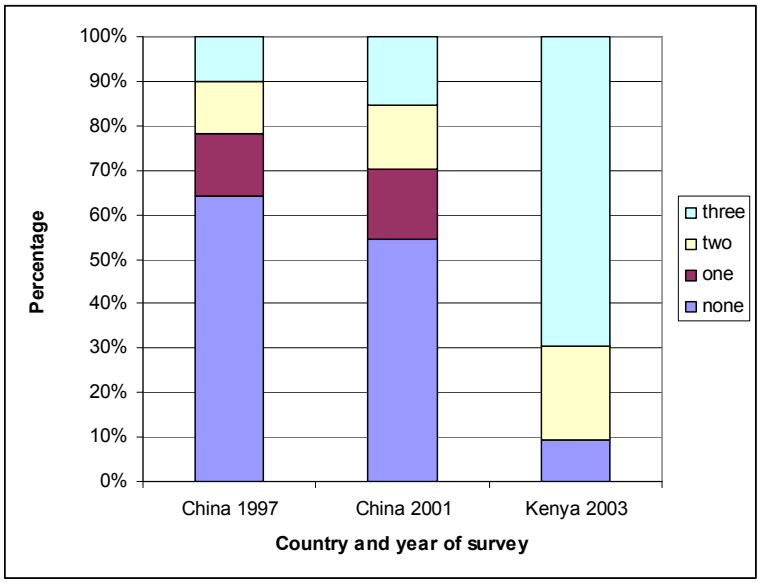

Figure 2 suggests that in the Kenyan context the level of knowledge about HIV/AIDS misconceptions is much higher than in the Chinese context. This difference might be attributed to the various interventions and campaigns in the two countries and to the differences in stages of the HIV epidemics in Kenya and China.

Further individual level analysis in the four countries will help to understand levels of success in educational campaigns in different parts of the world and macro level analysis of the countries' contexts will help to explain the differences in effectiveness of educational campaigns.

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