



ORIGINAL RESEARCH ARTICLE

VULNERABILITY TO UNSAFE SEX AND HIV INFECTION AMONG WIVES OF MIGRANT WORKERS IN FAR WESTERN NEPAL

A Aryal^{1*}, YN Yogi² and H Ghimire³

¹ SRH and HIV & AIDS Division, CARE-Nepal, Kathmandu, Nepal

² Safe Passage Project, CARE-Nepal, Dhangadhi, Nepal

³ Department of Community Medicine and Public Health, Chitwan Medical College, Bharatpur-10 Chitwan, Nepal

*Correspondence to : Dr Arjun Aryal, SRH and HIV & AIDS Division, CARE-Nepal. E-mail: drarjunaryal@gmail.com

ABSTRACT

In average, one from every two households of Far-Western Nepal, and 14.75 % of the male population of Dadeldhura, Doti and Kailali were at abroad, mostly in India. The migrant people engage in high risk sexual practices in India, contract Human Immuno-deficiency Virus (HIV) and transmit it to their wives. The prevalence of HIV among wives of migrants as per Integrated Biological and Behavioral Surveillance Survey (2008) was 3.3%. So, it was important to study the HIV related knowledge and vulnerability of these women. The study was carried out in 297 randomly selected wives of migrant workers in Doti, Dadeldhura and Kailali districts of Nepal. Eighty-six percent of the respondents had heard of HIV and AIDS, 4% had comprehensive knowledge on HIV prevention; 64% perceived HIV could transmit through mosquito bite and 42% of the women knew at least two advantages of condom. The women ever discussed about sex with their husbands were 34%. Seventy two percent expressed that People Living with HIV would not reveal their HIV status due to fear of losing social respect associated with discrimination. Comprehensive education program is needed to increase the level of correct knowledge on HIV prevention among wives of migrant workers. Targeted intervention among wives of migrant workers is important to make them able to negotiate for safe sexual practices with their husbands for HIV prevention and disclose their status for accessing services.

Key Words: HIV and AIDS, Knowledge, Nepal, Sex, Vulnerability & Wives of Migrant Workers

INTRODUCTION

It is estimated that about 55,626 people are living with HIV in Nepal in 2010, ¹ large portion of which is unrevealed due to limitations of Nepal's public health surveillance system. By July 2011, more than 2,000 cases of deaths due to AIDS and 18,535 cases of HIV infections were officially reported, and one third of them were women. ² Nepal is classified as a country with concentrated HIV epidemic. The links between mobility and HIV transmission have been well documented. The census of 2011 recorded that one from every two households in average and 14.75% of the male population of Dadeldhura, Doti and Kailali were at abroad. ³ A large number of men in the far-western Nepal move to India for seasonal search of employment. Separated from their spouses and communities for extended periods of time, many of these migrant workers indulge in unsafe sexual practices with and commercial sex workers. Both these migrant workers as well as the sex workers often have multiple partners, enhancing the risk of HIV-infection. ⁴ According to Integrated Biological and Behavioral Surveillance among Male Labor migrant workers in 11 Districts in Mid to Far-Western Regions of Nepal, Far western and Mid-western Region have

high prevalence of HIV (1.4%) among migrant population. ⁵

When the workers return home, many bring HIV virus with them. The highest percentage of total cases of HIV in Nepal is contributed by seasonal labor migrant workers (46%) and the studies reveal that up to 10% of migrant workers returning from India are HIV positive. The returnee migrant workers are extensively transmitting the HIV virus to their spouses, specially the housewives. The prevalence of HIV among wives of migrants as per Integrated Biological and Behavioral Surveillance Survey, 2008 was 3.3%. So, it is important to identify the knowledge and vulnerability of these women for prevention of HIV.

MATERIALS AND METHODS

Context

The study was carried out in Dadeldhura, Doti and Kailali districts of Far Western Development Region of Nepal. Thirty Village Development Committees (10 in each district) with relatively higher number of migrant workers, and reported cases

of HIV were considered while selecting the study area. The data was collected in January-February, 2008.

Study design

A cross-sectional study design was carried out to collect the information. Households with at least one mobile person (going out from the district in search of work or their profession and remained at least six months away from the home at least once during past two years) in the family were defined as eligible household for the purpose of our study. Spouses of mobile persons in the visited families of the selected VDCs/ municipalities were interviewed using interview schedule.

Sample size

Altogether, 297 spouses of migrant workers in three districts were selected as sample. Total of 297 spouses of migrant workers (Dadeldhura 105, Doti 95, and Kailali 97) were interviewed.

Sampling frame and sampling design

Complete household listing were collected from 2001 Census database in the respective districts. Using this frame, households were selected by employing two-stage random sampling method.⁹ In case of no mobile person in the family or unavailability of mobile person, the next nearest household was contacted and interviewed.

Study tools

An interview schedule for spouses of the migrant workers was developed. A thorough review of various researches undertaken in Nepal and abroad on migration and HIV and AIDS was carried out which formed the basis for developing the tool.

Administration of field survey

Training of trainers was conducted for the survey supervisors. Then, enumerators' training was conducted in each district. Local person with Community Medical Assistants or Auxiliary Nurse Midwives background and previous exposure in similar studies were selected as enumerators. Each team of two enumerators was supervised continuously by supervisors who followed them in the field for on-site coaching and guidance. In the selected areas, the required number spouses of migrant workers were interviewed.

Data quality

Sufficient attention was paid to minimize sampling error, non-response error, incorrect information obtained from respondents and recall bias to maintain high quality of data at all levels.

All data forms were checked for completeness, clarity and consistency at the field level. Computer editing was done at the central level.

Data analysis

The data were entered and analyzed in SPSS 13.0 version.

Ethical consent

Verbal voluntary consent was taken from all the respondents explaining the purpose and procedures of the study. Confidentiality was maintained throughout the research.

RESULTS

Socio-demographic characteristics: The wives of the migrant workers had mean age 25.5 ± 6.3 years, and majority were of high reproductive age group, i.e. 20-24 years (Dadeldhura: 37.1%, Doti: 43.2% and Kailali: 37.1%). Two-third (67%) of respondents were illiterate (illiteracy was 63.8% in Dadeldhura 95.8% in Doti and 42.3% in Kailali).

Destination and occupation of husbands of respondents: The husbands of the respondents commonly migrated to India (97.6%) rather than to other parts of Nepal or other neighboring countries (Dadeldhura 95.2%, Doti-98.9% and Kailali-99.0%). At their destination, the migrants were mainly engaged in labor work such as wage-based security guard (24.2%), restaurant workers (19.5%), domestic workers (18.5%), private companies (10.7%) factory workers (9.8%), porters (7.7%) and vehicle helpers (6.7%).

Awareness on on HIV and AIDS and knowledge on modes of transmission of HIV: Majority of the respondents had heard of HIV and AIDS (Dadeldhura: 84.8%, Doti: 77.9% and Kailali: 95.9%). Majority (82.4%) of the wives of the migrant workers (Dadeldhura-76.4%, Doti-78.4% and Kailali-91.4%) believed that HIV can be transmitted through unsafe sex. While asking the respondents who said that HIV can be prevented 71% (Dadeldhura: 68, Doti: 58 and Kailali: 85), 75.7% (Dadeldhura: 83.8%, Doti: 87.9% and Kailali: 60.7%) said that HIV can be transmitted through breast-milk of HIV positive woman to the baby. Others (11.4%) either said that it couldn't be transmitted (Dadeldhura: 5.9%, Doti: 1.7% and Kailali: 22.6%) and had no idea by 12.6% (Dadeldhura: 10.3%, Doti: 8.6% and Kailali: 16.7%) [Table 1].

Table 1: Knowledge of wives of migrant workers on modes of transmission of HIV

HIV could be transmitted through	Dadeldhura		Doti		Kailali		Total	
	No	%	No	%	No	%	No	%
Unsafe sex with PLHIV	n=89	-	n=74	-	n=93	-	n=256	-
Yes	68	76.4	58	78.4	85	91.4	211	82.4
No	18	20.2	15	20.3	8	8.6	41	16
DK/NA	3	3.4	1	1.6	0	0	4	1.7
Breastfeeding by HIV positive mother	n=68	-	n=58	-	n=85	-	n=211	-
Yes	57	83.8	51	87.9	50	60.7	159	75.7

No	4	5.9	1	1.7	19	22.6	24	11.4
DK/NA	7	10.3	6	8.6	14	16.7	27	12.6
Mother to child during birth	n=89	-	n=74	-	n=93	-	n=256	-
Yes	83	93.3	66	89.2	81	87.1	230	89.8
No	4	4.5	5	6.8	4	4.3	13	5.1
DK/NA	2	2.2	3	4.1	8	7.5	13	5.1

No. =Number, n=total respondents, DK: Don't Know, NA: No Answer

Similarly, 89.8% (Dadeldhura: 93.3%, Doti: 89.2% and Kailali: 87.1%) believed that HIV could be transmitted to an unborn child while 5.1% (Dadeldhura: 2.2%, Doti: 4.1% and in Kailali: 7.5%) did not have idea.

Knowledge on the prevention of HIV: Most of respondents believed that there was possibility of preventing themselves from HIV (Dadeldhura: 76.4%, Doti: 78.4% and Kailali: 91.4%). The major ways of prevention of sexual transmission of HIV as marked by the respondents were: by using condom every time one undergoes sex with person at risk of HIV 54.5% (Dadeldhura: 47.1%, Doti: 50.0% and Kailali: 63.5%), being faithful to one's partner 32.7% (Dadeldhura: 30.9%, Doti: 32.8% and Kailali: 34.1%) and abstinence 32.2% (Dadeldhura: 35.3%, Doti: 5.2% and Kailali: 48.2%). These are the three responses regarding prevention of HIV. The percentage of respondents having correct knowledge on all these three methods of prevention was 3.8% (Dadeldhura: 7.4% and Kailali: 3.5%). Other methods of preventing HIV given by the respondents were: not sharing of used razor 17.1% (Dadeldhura: 17.6%, Doti: 28.2 and Kailali: 28.2%), avoiding sexual contact with sex workers 9% (Dadeldhura: 11.8%, Doti: 3.4% and Kailali: 10.6%), having no sexual contact with persons having many sexual partners 5.7% (Dadeldhura: 7.4%, Doti: 6.9% and Kailali: 3.5%), limiting the number of sexual contact 4.7% (Dadeldhura: 8.8%, Doti: 0% and Kailali: 4.7%). Few other methods of HIV prevention

as reported by the spouses of migrant workers were: avoiding sexual contact with injecting drug users 2.4% (Dadeldhura: 2.9%, Doti: 3.4% and Kailali: 2.4%), avoiding use of injectable narcotics 17.1% (Dadeldhura: 14.7%, Doti: 3.4%, and Kailali: 28.2%), avoiding blood transfusion 15.6% (Dadeldhura: 13.2%, Doti: 6.9% and Kailali: 23.5%) A small proportion of respondents (2.4%) did not know about the ways in which HIV can be prevented (Dadeldhura 4.4% and 2.6% in Doti).

Misconceptions of wives of migrants on HIV and AIDS: Majority of the respondents (64%) said that mosquito and insect bites can transmit HIV (Dadeldhura: 66.2%, Doti: 67.2% and Kailali: 60.0%). Of those who had heard of HIV and AIDS 43.3% (Dadeldhura: 52.8%, Doti: 56.8% and Kailali: 23.7%) believed that HIV can be transmitted if the plate is shared with HIV positive person while 5.9% (Dadeldhura: 4.5%, Doti: 5.4% and Kailali: 7.5%) did not have idea. Further, 18.4% (Dadeldhura: 23.6%, Doti: 12.2%, and Kailali: 18.3%) believed that HIV could be transmitted through handshake while 4.7% (Dadeldhura: 7.9%, Doti: 4.1%, and Kailali: 2.2%) had no idea [Table 2].

Table 2: Misconceptions of wives of migrant workers on HIV and AIDS

HIV could be transmitted through	Dadeldhura		Doti		Kailali		Total	
	No	%	No	%	No	%	No	%
Mosquito or insect bites	n=68	-	n=58	-	n=85	-	n=211	-
Yes	45	66.2	39	67.2	51	60.0	135	64.0
No	11	16.2	16	27.6	23	27.1	50	23.7
DK/NA	12	17.6	3	5.2	11	12.9	26	12.3
Sharing the same eating plate	n=89	-	n=74	-	n=93	-	n=256	-
Yes	47	52.8	42	56.8	22	23.7	111	43.3
No	38	42.7	28	37.8	64	68.8	130	50.8
DK/NA	4	4.5	4	5.4	7	7.5	15	5.9

Handshake	n=89	-	n=74	-	n=93	-	n=256	-
Yes	21	23.6	9	12.2	17	18.3	47	18.4
No	61	68.5	62	83.8	74	79.6	197	77.0
DK/NA	7	7.9	3	4.1	2	2.2	12	4.7

No. =Number, n=total respondents, DK: Don't Know, NA: No Answer

Attitude towards PLHIV: Total of 52% would eat together (Dadeldhura: 34.8%, Doti: 43.2%, and Kailali: 77.4%), 89% would take care at home by family members and 73% would attend community gathering with PLHIV.

Knowledge and practice of HIV testing and counseling service: Altogether, 49.6% (Dadeldhura: 37.1%, Doti: 43.2% and Kailali: 66.7%) reported non-availability of HIV testing and counseling centers. About 17.2% (Dadeldhura: 14.6%, Doti: 12.2% and Kailali: 23.7%) confirmed location of facilities for such testing while 33.2% (Dadeldhura: 48.3%, Doti: 44.6%, and Kailali: 9.6%) were not sure about the location of such testing centres. Only 8.6% (Dadeldhura: 2.2%, Doti: 2.7% and Kailali: 19.4%) had ever tested for HIV while rest of them had never tested. Among those who had been ever tested for HIV, 50.0% in Doti and 88.9% in Kailali had tested within past one year while 100% in Dadeldhura, had the tested before one year. Out of those who had tested, 36.4% (Dadeldhura: 50% Doti: 50% and Kailali:

33.3%) had done the test in the hospital, same proportion in VCT centres, and the remaining of Kailali had tested in private clinic (11.1%) and mobile VCT clinics (5.6%). Among them, all in Dadeldhura, 50% in Doti and 77.8% in Kailali had collected the results of HIV testing.

Inerperonal communication on sex and sexuality: Total of 34% of wives of migrant workers had discussed about sex, sexuality and sexual behavior (Dadeldhura: 54.3%, Doti: 11.6% and Kailali: 34.0%). Mainly, they confided the discussion on sister by 36.6% (Dadeldhura: 14.0%, Doti: 90.9%, Kailali: 57.6%), health workers by 31.7% (Dadeldhura: 33.3%, Doti: 9.1%, and Kailali: 36.4 %) and spouse by 28.7% (Dadeldhura: 40.0% and Kailali: 18.2%) [Table 3].

Table 3: Interpersonal communication by wives of migrant workers on sex and sexuality

Ever discussed about sex and reproductive health issues	Dadeldhura		Doti		Kailali		Total	
	No.	%	No.	%	No.	%	No.	%
Yes	57	54.3	11	11.6	33	34.0	101	34.0
No	48	45.7	84	88.4	64	66.0	196	66.0
Person with whom discussed	n=57	-	n=11	-	n=33	-	n=101	-
Mother	5	8.8	1	9.1	0	0.0	6	5.9
Sisters	8	14.0	10	90.9	19	57.6	37	36.6
Relatives	4	7.0	0	0.0	1	3.0	5	5.0
Spouse	23	40.0	0	0.0	6	18.2	29	28.7
Teacher	3	5.3	0	0.0	0	0.0	3	3.0
Female friend	4	7.0	0	0.0	0	0.0	4	4.0
Health worker	19	33.3	1	9.1	12	36.4	32	31.7
Adult peer educator	0	0.0	1	9.1	0	0.0	1	1.0
Mobile seminar	2	3.5	1	9.1	2	6.8	5	5.0
Others	6	10.5	0	0.0	6	18.2	12	11.9

No. =Number, n=total respondents

Media habit

The most common sources of information on HIV and AIDS were radio 56.3% (Dadeldhura: 47.2%, Doti: 25.7%, and Kailali: 89.0%), Community Health Workers 34% (Dadeldhura: 34.8%, Doti: 27.0%, and Kailali: 38.7%), friends/neighbors 43.8% (Dadeldhura: 34.8%, Doti: 68.9%, and Kailali: 32.3%). Other sources of information were PHCC/HP/SHP 12.6% (Dadeldhura: 12.4% and Kailali: 21.5%), NGO staff 9% (Dadeldhura: 11.2%, Kailali: 14.0%), street drama 6.3% (Dadeldhura: 13.5%), and school/teacher (Dadeldhura 10.1%).

Knowledge of condom and its use during sex with husband

The majority of the spouses (88.9%) of migrant workers had heard of condom (Dadeldhura: 90.5%, Doti: 76.8% and Kailali: 99.0%). Only 5.4% wives migrant workers used condom during most recent sexual contact with their husbands. (Dadeldhura-7.6%, Doti-0% and Kailali-8.2%).

DISCUSSION

Two-third of the wives of the migrant workers in this study were illiterate and more than one-third were of highly reproductive age. The figures that are consistent with Integrated Biological and Behavioral Surveillance Survey, 2008 among wives of migrant workers in far-western Nepal.¹⁰ The poor education and younger age of wives of migrant workers make them likely to have more risky sexual practices¹¹ due to which the vulnerability to HIV and severity of the HIV epidemic increases.¹² The husbands of more than ninety seven percent of the respondents migrated to India. Researches indicate that the migrants who had ever visited sex workers in India have HIV prevalence of 8.2 percent compared to HIV prevalence of 0.8 percent among those respondents who had not visited a sex worker in India.¹³

Most of respondents believed that there was possibility of preventing themselves from HIV and AIDS. The major ways of prevention of sexual transmission of HIV as marked by the respondents were: by using condom every time one undergoes sex with person at risk of HIV, being faithful to one's partner, and abstinence. The percentage of respondents having correct knowledge on all these three methods of prevention was very less. Less-educated people may have a poor understanding of HIV and preventive behaviors and thus have unprotected sex.¹⁴ The main idea of HIV prevention mentioned by the wives of migrant workers was avoiding unsafe sex (sexual contact with sex workers, person having many sexual partners, injecting drug users). Other methods of preventing HIV given by a small proportion of them were: avoiding sharing of piercing materials and injectables (used razor, injectable narcotics), avoiding blood transfusion from PLHIV. Nearly three-fourth of the respondents said that HIV can be transmitted through breast-milk of HIV positive woman to the baby. Similarly, about none out of each 10 respondents believed that HIV could be transmitted to an unborn child. To change sexual behaviours, people need to be aware of their risk and have some basic knowledge on HIV and AIDS.¹⁵

The wives of migrants were many misconceptions about

HIV transmission. Almost two-third of the respondents said that mosquito and insect bites can transmit HIV, which was extremely common belief.¹⁶ Nearly half of the respondents believed that HIV can be transmitted if the plate is shared with HIV positive person and one-fifth believed that HIV could be transmitted through handshake, which were substantial misconceptions.¹⁷ About half of the wives of migrant workers would eat together with PLHIV, nearly three-fourth would attend community gathering with PLHIV, and nine out of each ten would take care at home by family members even if they get HIV. Researches have established relationship between knowledge about HIV, fear of infection and stigma (blaming and shaming) or discrimination.¹⁸

Less than one-fifth of the wives of migrant workers reported availability of HIV testing facilities in their districts where as other respondents were unknown. Very few of those who were aware of VCT facilities had ever tested for HIV, mostly in hospital/VCT centres and before one year. This limited access to reliable and culturally appropriate information on HIV & AIDS and services increases vulnerabilities to HIV in context of mobility.¹⁹

Only one-third of wives of migrant workers had discussed about sex, sexuality and sexual behavior, mostly with sister, health workers, and spouse. Majority of the spouses of migrant workers had heard of condom and HIV and AIDS. The most common sources of information on HIV and AIDS were radio, Community Health Workers, friends/neighbors, aided by television in Kailali. Other sources of information were health workers in PHCC/HP/SHP, NGO Staff, and school/teacher. When most of the wives of migrant workers had heard of condom, only one out of every twenty wives migrant workers used condom during most recent sexual contact with their husbands. These demand on need of evidence based interventions targeted for wives of migrant workers to reduce their vulnerability to HIV. Researches have demonstrated that HIV prevention education through peer outreach model,²⁰ integration of successful life-skill based HIV and AIDS intervention²¹ for promotion of safe sex and consistent condom use based on integrated model of behavior change,²² public information and education programs,²³ are some of proven evidence based strategies to prevent and combat HIV and AIDS.

ACKNOWLEDGEMENT

We also thank all the respondents, data enumerators and stakeholders participating and supporting in this study.

REFERENCES

1. National Centre of AIDS and STD Control (NCASC). National HIV/AIDS Strategy 2011-2016. Kathmandu: NCASC, Department of Health Services; 2011.
2. National Centre of AIDS and STD Control (NCASC). Nepal HIV and AIDS Estimates. Kathmandu: National Centre of AIDS and STD Control (NCASC); 2011
3. Central Statistical Bureau (CBS), His Majesty's

- Government/Nepal. National Population Census 2011. Kathmandu: CBS, His Majesty's Government/Nepal; 2011.
4. Bryceson D, Fonseca J, Kadzandira J. Social Pathways from the HIV/AIDS Deadlock of Disease, Denial and Desperation in Rural Malawi. Malawi: Centre for Social Research, University of Malawi; 2004.
 5. NCASC/USAID/FHI/New Era. Integrated Biological and Behavioral Surveillance Survey among Male Labor Migrant Workers in 7 Districts of Mid to Far-Western Regions of Nepal. Kathmandu: NCASC/USAID/FHI/New Era; 2009.
 6. Collins J, Rau B. AIDS in the Context of Development. Social Policy and Development Programme. Geneva: United Nations Research Institute for Social Development; 2000.
 7. Department of Health Services, MoHP. National HIV/AIDS Strategy 2002-2006. Kathmandu: Department of Health Services, MoHP; 2002.
 8. FHI/NCASC. Integrated Biological and Behavioral Surveillance Survey among Wives of Migrants. Kathmandu: FHI/NCASC; 2008.
 9. Family Health International (FHI). Behavioral Survey. Kathmandu: Family Health International; 2002.
 10. FHI/NCASC. Integrated Biological and Behavioral Surveillance (IBBS) Survey among Wives of Migrants in Four Districts of Far-Western Nepal. Kathmandu: FHI/NCASC; 2010
 11. Valerie A, Paz S, Joseph E, deGraft J, Bisika T, Amy O et al. Social, Economic and Demographic Determinants of Sexual Risk Behaviors among Men in Rural Malawi: A District-Level Study. *Afr J Reprod Health* 2007;11[2]:33-46).
 12. Uchudi J, Magadi M, Mostazir M. A multilevel analysis of the determinants of high risk sexual behavior (multiple sexual partners) in Sub-Saharan Africa. *Social Research Methodology Centre Working Paper: Africa*; 2010.
 13. New Era/SACTS Integrated Bio-Behavioral Survey among Male Labor Migrants in 11 Districts in Western, and Mid-Far Western Regions of Nepal. New Era: Kathmandu; 2006.
 14. Gras MJ, Benthem V, Birgit HB, Coutinho RA, Hoek VD. Determinants of High-Risk Sexual Behavior among Immigrant Groups in Amsterdam: Implications for Interventions. *Journal of Acquired Immune Deficiency Syndromes*: Oct 2001 Vol 38[2] pp 166-172.
 15. Brummer D, Labour Migration and HIV/AIDS in Southern Africa. Southern Africa:International Organization of Migration (IOM); 2003.
 16. Leigh J, Debbie B. HIV Risk Factors: A Review of the Demographic, Socio-Economic, Bio-Medical and Behavioral Determinants of HIV Prevalence in South Africa. CARE Monograph No. 8, 2002. [cited 2011 Dec 5]; Available from http://www.commerce.uct.ac.za/Research_Units/CARE/Monographs/Monographs.pdf.
 17. Williams B, Gilgen D, Campbell C, Taljaard D, MacPhail C. The natural history of HIV/AIDS in South Africa: A biomedical and social survey in Carletonville. Johannesburg: Council for Scientific and Industrial Research; 2000.
 18. Harriet D, Andrew B. Commentary: Factors affecting HIV/AIDS-related stigma and discrimination by medical professionals. *Int. J. Epidemiol.* (2007) 36 (1): 185-186. [cited 2011 Dec 5]; Available from <http://ije.oxfordjournals.org/content/36/1/185.full/>
 19. National Centre of AIDS and STD Control (NCASC). National HIV/AIDS Strategy 2006-2011. Kathmandu: NCASC, Department of Health Services; 2006.
 20. The Stop AIDS Now Peer Education Center. [cited 2011 Dec 10]; Available from www.silcom.com/stopaids~/
 21. The International Bank for Reconstruction and Development/The World Bank. Education and HIV/AIDS: A Window of Hope. Washington: The International Bank for Reconstruction and Development/The World Bank; 2002.
 22. CDC AIDS Community Demonstration Projects. A Successful Community-Level Intervention to Reduce HIV Risk. *The American Journal of Public Health*, Mar 1999.
 23. CDC NPIN. The Eleven Elements of Successful Prevention Programs. CDC NPIN: Available from <http://www.cdcnpin.org/scripts/hiv/programs.asp/> [cited 2011 Dec 11].