12 ENHANCING THE QUALITY OF LIFE THROUGH A CROSS-CULTURAL PROGRAM OF HIV/AIDS PREVENTION IN SICHUAN, CHINA.

Daphne Keats

Introduction

First may I thank Professor Wan Rafaei for inviting me to speak at this Colloquium. It is a great pleasure to be here in Malaysia to see again so many old friends from Malaysia and Thailand and to meet the new generation of researcher. It is particularly pleasing to see the result of this co-operation between the psychologists of the International Islamic University Malaysia and the Behavioural Science Research Institute of Srinakharinwirot of Thailand.

As many of you here will know, my contact with both Malaysian and Thai psychologists goes back to many years. In most previous visits, however, I was not alone. Your kind invitation to be your guest speaker on this occasion is also a tribute to my husband, John, with whom so many of our joint research activities were carried out. I thank you most sincerely for the kind messages of sympathy which you sent to me on his death this year.

This paper describes a program of cross-cultural research and its application in the prevention of HIV/AIDS in some of the most vulnerable populations in Sichuan, China. Research by Wang (1998) on the sexual risk-taking behaviour of young men in the two employment systems of China, revealed widespread ignorance of the nature of the disease. The self-employed were at great risk, the official moralistic government messages were not reaching them, and many had come to Chengdu from distant ethnic minority backgrounds where Chinese was not the language spoken. A prevention strategy was devised whereby groups of volunteers were trained to spread safe sex health messages to groups of their peers. The messages were delivered in a series of stories delivered in a traditional style in their own language. Knowledge, attitudes and behavioural intentions were measured before, and five months after, the intervention. A comparison group was tested before and after five months, but received no intervention. Participants were from the majority Han, and the Yi and Tibetan ethnic minorities. Results showed that the program was successful. In a second series of studies by Gao (2005) using a participatory communication approach a prevention program aimed at safer sex practices was developed in co-operation with members of the gay community and other men who have sex with men. Before and after measures showed that the program was successful. The outcome of these studies indicates an enhancement of the quality of life not only for the participants but also for their local communities.

The research I want to tell you about in this address is a series of studies carried out in Sichuan, China, with some groups of young men and women, who, because of their life styles are at risk of contracting sexually transmitted diseases, HIV and AIDS. It is a program of prevention aimed at enhancing their quality of life which has now reached

into the remote ethnic minority communities and the urban scene of the gay community in Chengdu.

The HIV/AIDS epidemic spread rapidly in the 1980's in China, and the Province of Sichuan has been one of the hardest hit (UN China, 1999, 2003). Sichuan is one of China's largest and most populous provinces, with over 100 million population and containing about 20 ethnic minorities (Ma Yin, 1989). Some of these have populations of several million, others only a few thousand. Chengdu, the capital, is a city of over ten million.

The ethnic minorities I will talk about today are the Yi and the Tibetans, the Yi people in the South-West and the Tibetans in the North West, and the Qiang people closer to Chengdu. A group of Han trishaw drivers from Yaan city provided the sample from the Han majotiry control group.

The Background

The prevention program arose from the PhD research into the sexual risk taking behaviour of young men in the two employment systems of China by Wang Shuguang (Wang 1998), which I had supervised at the University of Newcastle. It was clear that we should try to do something to help.

Wang was able to get a National Health and Medical Research Committee Post Doctoral Fellowship at the University of South Wales. The U.N.S.W. gave him a small grant but he had to find the research money himself. After many failures to obtain outside funding he finally gained support from the John and Daphne Keats Research Endowment Fund, a small fund which we had set up to encourage young researchers in our fields of quantitative and cross-cultural psychology. Other funding came later from UK China and the Ford Foundation.

Sexual Risk Taking Behaviour in The Two Employment Systems

At the time, to overcome rising unemployment, the Government encouraged those who could not obtain jobs in the State danwei employment system to become self-employed (the getihu). Many were young men. For most, their level of education was low, many worked in long distance transport, many came from distant parts of Sichuan, often travelling to the coast and even overseas. The richer more successful getihu were able to have social lifestyles which centred around meeting in high class hotels. Cut off from the official sources of anti-AIDS information, the getihu obtained their information from friends, street posters and shops selling all sorts of "cures". One popular belief was that HIV/AIDS was a disease of foreigners which did not apply to Chinese. In-depth interviews with a small group of sufferers in hospital (Wang & Keats, 1999) showed how sadly ignorant they were as to how they had contacted their illness or how it was passed on to others.

For the study, Wang developed a detailed questionnaire covering background, knowledge and attitudes to HIV/AIDS and reported risk taking sexual behaviour and use of condoms as preventatives. Condom use was chosen as the criterion because the degree of understanding of their usage and availability could easily be established. No questions

contained any condemnatory wording or moralistic term.

Participants' names and occupations were randomly selected from the local Community Office records. A sample of 200 state employed and 200 self-employed was obtained. All participants were interviewed using the questionnaire as the guide.

From the results it was clear that the getihu engaged in greater risky sexual behaviour than the state employed, but for all the level of knowledge was low (abysmal) and the use of condoms rare. It was also clear that it was the social networks which were the source of misinformation, and which gave them support for sexually dangerous behaviour.

The Prevention Studies

It was clear that any effective prevention program would need to make use of the social networks rather than target individuals as had been the case in earlier western research but was being recognized only lately.

We therefore devised a research plan in which small groups of young volunteers, young men self-employed, were trained to improve their own knowledge and attitudes to a point where they could pass on the safe sex health messages to their peers. The ethnic groups included in these studies were the majority Han from Yaan, the Yi from the Shi Mian district, and the Tibetans from the A-Ba district.

The Direct Training Group

The volunteers were selected as being in the age range 17-30, popular in their local community and good at social communication. These became the Direct Training Group, with 50 in each location.

Health workers from the local community were recruited to help in the training program with Wang and colleague Prof Zhao Jian Wei from Sichuan Academy of Social Sciences. The members of this group worked together in small groups. Before receiving the training they were tested for knowledge, attitudes and reported behaviour before, using items from the questionnaire.

The Indirect Training Group

When the volunteers had reached some level of involvement they were asked to pass on the message to at least 3-8 of their peers. The names were collected by the research team. From these names 50 were randomly selected to become the Indirect Training Group. They were each tested before they received the health message from members of the Direct Training Group.

The Comparison Group

A third group living more than 50km from the first two groups of participants was identified from local community lists. These young men were tested with the same questions as the others, but were not given any intervention.

All three groups were tested again about five months later.

The Role Model Stories

Four role model stories were used as a major educational tool to develop knowledge and peer communication skills and to encourage condom use.

The volunteers translated them into their local languages and language styles using the traditional story-telling mode of sex-related humorous story telling *(Qing Gang Gushi),* which is ubiquitous and popular. The themes of the stories were based on the earlier research findings of Wang (1995) and behaviour change theories from other research (e.g. Ajzen & Fishbein, 1994; Bandura, 1994).

Story 1: 'Protecting my family from AIDS' – emphasised positive information toward developing HIV/AIDS related knowledge.

Story 2: 'A Cautious Friend' was about attitudes to safe sex, beliefs and social norms.

Story 3: 'Getting Used to Condoms' was about the decision to try the use of condoms.

Story 4: 'Always Carry a Condom' – focussed on sustaining safe sex.

The focus on condom use was selected for being a practical aim which was not moralistic, and did not denigrate them for their sexual behaviour or their cultural traditions.

The training program was supported by other activities to promote their communication skills – including small group workshops and focus groups where they improved their own knowledge and translated the stories into their own languages.

Each volunteer was given a sheet of information and a badge of red ribbon to show their participation to give to future contacts. (The trishaw drivers in the Han groups put theirs on their bicycles). These became a very popular way of showing group identity.

Results

The results are reported in Keats & Wang (2005).

Table 1 Total numbers involved in the study among three cultural groups *

Study groups	Group A Direct training	Group B Indirect intervention		Group C Comparison	
Different cultural groups		Three months period for process evaluation	Within five months		**Total**
Shi-Mian Yi ethnic group	55	193	769	53	1012
A-BaTibetan ethnic group	55	124	774	53	892
Yaan-Han group	55	287	992	54	1334
Actual number involved in the program	165	604	2535	160	3493
Actual number interviewed	160		160	160	480
Final numbers included in the statistical analysis	150		150	150	450

* Keats, D. & Wang, S., 2005.

Table 1 shows that the total numbers contacted far exceeded the 450 needed for the research plan. The numbers after 3 months were derived from checking their understanding of and attitudes to the role model stories. This check was satisfactory in all groups. Note how large is the increase after 5 months in the Indirect Intervention group.

Table 2 Socio-Demographic characteristics of Yi, Tibetan and Han cultural groups at baseline (*n = 450*) *

Characteristics	Frequency			
	Yi ethnic group (*n = 150*)	Tibetan ethnic group (*n = 150*)	Han cultural group (*n* = 150)	Total sample (*n* = 450)
Age				
Mean	26.59	25.66	26.88	26.71
SD	6.54	4.63	7.99	6.39
$\chi^2 = 0.183$; p = 0.988				
Current marital status				
Married	62(41.3)	58(38.7)	52(34.6)	172(38.2)
Never married / single	72(48.0)	76(50.7)	63(42.0)	211(46.8)
Divorced	6(4.0)	8(5.3)	14(9.3)	28(6.2)
Separated	8(5.3)	7(4.6)	13(8.6)	28(6.2)
Committed relationship	2(1.3)	1(0.6)	8(5.3)	11(2.4)
$\chi^2 = 7.286$; p = 0.328				
Monthly income (Chinese Yuan)				
¥ 100 and less	72(46.6)	58(36.6)	42(32.6)	172(38.2)
¥ 101 – 300	58(38.6)	66(44.0)	75(51.3)	199(44.2)
¥ 301 – 500	20(13.3)	24(16.0)	26(21.3)	70(15.6)
¥ 501 – 1000		2(1.3)	7(4.6)	9(2.0)
¥ 1000 +				
Kruskal-Wallis Test (Z) (Mean Rank) = 9.214; p = 0.021				
Education				
Never attended school	11(7.3)	9(6.0)	3(2.0)	23(5.1)
Less than 3 years primary schooling	84(56.0)	63(42.0)	54(36.0)	201(44.6)
Completed year 6 primary schooling	40(26.7)	50(33.3)	59(39.3)	149(33.1)
Completed middle school	12(8.0)	21(14.0)	25(16.7)	58(12.8)
Completed high (or technical high) school	3(2.0)	7(4.6)	9(6.0)	19(4.2)
Completed college or university	0	0	0	0
$\chi^2 = 11.022$; p = 0.097				

*Keats, D. & Wang, S., 2005.

Analysis of the background data (Table 2) showed that in the 450 the level of income was low, as was the level of education reached; most were either married or single.

The Method of Analysis

The method of analysis was by t tests and chi squared for categorical data.

The major aim was to find out how lasting the effects were. Table 3 shows the changes from Pre-Test to Post Test.

Table 3 Changes from baseline to post-test after 5 months *

Knowledge, attitudes, and behaviour characteristics		Baseline, % (Pretest)	Post-Interve., % (Post-test)	Observed Change, % (95% CI)
Correct knowledge about safe / unsafe sex				
Direct training groups	Yi (*n*=50)	16.0	86.0	70.5 (54.6, 86.4)***
	Tibetan (*n*=50)	18.0	88.0	70.0 (53.8, 86.2)***
	Han (*n*=50)	22.0	90.0	68.0 (51.2, 84.5) ***
Indirect intervention groups	Yi (*n*=50)	14.0	74.0	60.0 (46.1, 73.9)***
	Tibetan (*n*=50)	18.0	80.0	62.0 (47.2, 76.8)***
	Han (*n*=50)	22.0	90.0	68.0 (51.2, 84.5)***
Comparison groups	Yi (*n*=50)	16.0	18.0	2.0 (-0.3, 4.3) n.s.
	Tibetan (*n*=50)	14.0	18.0	4.0 (-0.9, 8.9) n.s.
	Han (*n*=50)	24.0	22.0	-2.0 (-4.4, 0.4) n.s.
Correct attitudes toward HIV-related information				
Direct training groups	Yi (*n*=50)	20.0	84.0	64.0 (48.3, 79.7)***
	Tibetan (*n*=50)	22.0	90.0	68.0 (51.2, 84.5)***
	Han (*n*=50)	24.0	94.0	70.0(53.8, 86.2)***
Indirect intervention groups	Yi (*n*=50)	16.0	72.0	56.0 (42.9, 69.1)***
	Tibetan (*n*=50)	18.0	76.0	58.0 (43.7, 72.2)***
	Han (*n*=50)	26.0	86.0	60.0 (46.1, 73.9)***
Comparison groups	Yi (*n*=50)	14.0	16.0	2.0 (-0.3, 4.3) n.s.
	Tibetan (*n*=50)	22.0	20.0	-2.0 (-4.4, 0.4) n.s.
	Han (*n*=50)	22.0	26.0	4.0 (-0.9, 8.9) n.s.
Condom use with casual sexual partner/s				
Direct training groups (*n* = 145)	Yi (*n*=47)	2.1	36.1	34.0 (14.2, 53,8)***
	Tibetan (*n*=50)	2.0	38.0	36.0 (16.2, 55,8)***
	Han (*n*=48)	6.3	47.9	41.6 (19.3, 63.9)***
Indirect intervention groups (*n* = 137)	Yi (*n*=43)	2.3	27.9	25.6 (11.6, 39.6)***
	Tibetan (*n*=46)	4.3	30.4	26.1 (11.6, 40.0)***
	Han (*n*=48)	6.2	39.6	33.4 (14.0, 52.8)***
Comparison groups (*n* = 144)	Yi (*n*=46)	2.2	4.3	2.1 (-0.4, 4.6) n.s.
	Tibetan (*n*=48)	2.0	4.1	2.1 (-0.4, 4.6) n.s.
	Han (*n*=50)	6.0	4.0	-2.0 (-4.4, 0.4) n.s.
Condom use with regular sexual partner/s				
Direct training groups (*n* = 131)	Yi (*n*=40)	2.5	37.5	35.0 (15.4,54,6)***
	Tibetan (*n*=44)	2.2	38.6	36.4 (16.2, 56,6)***
	Han (*n*=47)	19.1	59.5	40.4 (18.3, 62.5)***
Indirect intervention groups (*n* = 133)	Yi (*n*=43)	6.9	30.2	23.3 (12.4, 34.2)**
	Tibetan (*n*=44)	2.3	27.2	24.9 (13.5, 36.3)**
	Han (*n*=46)	17.1	50.0	32.9 (14.7, 51.1)***
Comparison groups (*n* = 130)	Yi (*n*=44)	4.5	11.3	6.8 (-2.2, 13.8) n.s.
	Tibetan (*n*=42)	4.7	7.1	2.4 (-0.4, 5.2) n.s.
	Han (*n*=44)	18.1	15.9	-2.2 (-4.6, 0.2) n.s.
Number who reported having sex with more than one sexual partner				
Direct training groups (*n* = 145)	Yi (*n*=47)	68.0	52.6	-15.4 (-21.8, -9.0)*
	Tibetan (*n*=50)	47.5	64.3	-10.2 (-16.5, -4.0)*
	Han (*n*=48)	40.0	18.2	-21.8 (-30.7,-12.9)***
Indirect intervention groups (*n* = 137)	Yi (*n*=43)	68.2	58.9	-9.3 (-14.7, -3.5)*
	Tibetan (*n*=46)	74.6	68.8	-5.8 (-10.6, -1.0) n.s.
	Han (*n*=48)	40.5	27.0	-13.5 (-19.1, -7.5)**
Comparison groups (*n* = 144)	Yi (*n*=46)	67.8	69.6	1.8 (-0.2, 3.8) n.s.
	Tibetan (*n*=48)	72.9	77.0	4.1 (-0.7, 8.9) n.s.
	Han (*n*=44)	43.2	47.7	4.5 (-0.9, 9.9) n.s.

CI = Confidence interval; n.s. = no significance

* $p<.05$; ** $p<.01$; *** $p<.001$

*Keats, D. & Wang, S., 2005.

On correct knowledge, all direct and indirect training groups showed highly significant changes with no significant change in the comparison groups.

On correct attitudes towards HIV/AIDS information, a similar result was obtained.

Turning to changes in condom use, the same result appears with both casual and regular sexual partners.

The last set of results, on numbers who reported having sex with more than one sexual partner, does not show the same strong pattern, but change in this behaviour was not stressed in the intervention program. Any change to reduce the number was a by-product of the program, It was most apparent in the Han groups.

Shi-Mian Mie Tibetans Study

At the request of lamas and community leaders, a second study was carried out with Tibetans living in the Shi Mian Mie district, with similar results (Keats & Wang, 2005).

The Longitudinal Data

Since this major study a further follow up was carried out (Wang & Keats, 2007). In this study data from 480 participants, including groups of 80 from each of the original participants, were used as the subjects. The data was drawn from the original base line results from pre testing in 2002, the post testing in 2003 after 5 months, and further data in 2005 and 2007. Data from 2004 and 2006 were not included in this analysis.

The method of analysis was by χ^2 to test categorical variables, and F and t tests to determine statistical significances among scale means. Multiple regression and paired t tests were used to examine before and after intervention. The results are shown in Table 4.

Table 4 Changes from baseline to post-test in six-year follow-up

Knowledge, attitudes and sexual practices in three cultural groups (n = 480) [2]		Baseline	Post-Intervention – Observed Change, %, (95% CI) [1]		
		(2002)	(2003) posttest after 5 months	(2005)	(2007)
Correct knowledge about sexual health (%)[3]					
DTG	Yi (n=80)	16.3	66.2, 49.9 (34.6, 56.4)***	78.8, 12.6 (11.2, 22.0)***	86.3, 7.5 (3.2, 12.6)**
	Tibetan (n=80)	18.8	67.5, 48.7 (31.4, 52.2)***	78.8, 11.3 (7.9, 17.4)***	88.8, 10.8 (6.8,13.4)**
	Han (n=80)	22.5	71.3, 49.3 (34.2, 61.5)***	87.1, 15.8 (9.5, 22.1)***	90.0, 2.9 (1.2, 4.0)*
ITG	Yi (n=80)	13.8	32.5, 18.7 (16.1, 26.9)***	56.2, 23.7 (20.4, 35.3)***	77.5, 20.8 (19.1, 36.0)***
	Tibetan (n=80)	18.8	38.8, 20.0 (17.2, 27.0)***	66.2, 27.4 (21.2, 37.4)***	81.3, 15.1 (13.2, 21.8)***
	Han (n=80)	21.2	43.7, 22.6 (19.2. 31.2)***	73.7, 30.2 (24.7, 44.7)***	91.2, 17.5 (15.2, 24.5)***
Correct attitudes toward HIV-related information (%)[3]					
DTG	Yi (n=80)	20.0	55.0, 15.0 (13.7, 21.7)***	73.1, 18.1 (15.2, 23.7)***	86.3, 13.2 (10.7, 23.2)***
	Tibetan (n=80)	21.2	61.2, 40.2 (30.2, 54.5)***	83.3, 22.1 (19.2, 33.8)***	90.0, 6.7 (5.2, 9.4)**
	Han (n=80)	23.8	68.8, 45.0 (33.8, 56.2)***	88.8, 20.4 (14.4, 28.9)***	95.0, 6.2 (5.0, 8.3)**
ITG	Yi (n=80)	20.0	42.3, 22.3 (18.8, 29.1)***	61.2, 18.9 (16.2, 24.1)***	72.5, 11.3 (9.5, 14.2)**
	Tibetan (n=80)	20.0	55.0, 35.0 (23.7, 42.2)***	76.8, 21.3 (18.5, 27.4)***	81.3, 5.0 (2.2, 7.1)**
	Han (n=80)	22.5	62.5, 40.0 (32.1, 51.3)***	82.5, 20.0 (17.2, 28.6)***	90.0, 7.5 (3.4, 8.3)**
Condom use with casual sexual partnert/s (%)[4]					
DTG	Yi (n=66)	3.0	30.0, 27.0 (22.2, 31.8)***	45.0, 15.0 (9.4, 17.2)***	51.2, 6.2 (2.7, 4.3)*
	Tibetan (n=71)	2.8	38.8, 36.5 (26.2, 35.0)***	55.0, 16.2 (10, 20.0)***	62.5, 7.5 (3.8, 8.9)***
	Han (n=62)	3.2	42.3, 39.1 (32.3, 40.7)***	60.0, 17.7 (14.3, 19.3)***	73.8, 13.8 (9.7, 14.9)***
ITG	Yi (n=67)	1.4	23.8, 22.4 (16.1, 27.2)***	33.7, 9.9 (4.6, 11.8)**	36.7, 3.2 (0.4, 3.4) n.s.
	Tibetan (n=73)	2.7	31.3, 28.6 (17.2. 34.1)***	42.3, 11.0 (8.2, 13.7)***	47.5, 5.2 (2.2, 6.5)*
	Han (n=66)	4.5	43.7, 39.2 (24.0, 45.4)***	52.5, 8.8 (4.1, 12.8)***	62.5, 10.0 (7.4, 16.5)***

[1] data from 2004 and 2006 are not included in this table due to limited page size.

[2] Initial target of 85 participants were interviewed for each group to allow for possible attrition.

[3] The numbers were those who reached the criterion of correct knowledge and attitudes toward HIV-related information.

[4] the numbers were those who have reported they ever have casual sexual partner.

CI = 95% Confidence interval; n.s. = no significance

* $p < .05$; ** $p < .01$; *** $p < .001$

* Wang, S. & Keats, D., 2007.

The results from all the ethnic groups show positive improvement in reported sexual health, knowledge, attitude and use of condoms. There is even some reduction in the number of casual sex partners. That the Han groups showed more change than the Yi and Tibetans is not surprising, given their urban environment and higher income and better education. There was a definite enhancement of their quality of life. It was shown in the enthusiastic participation and involvement.

HIV/AIDS Prevention among Gay and Other Men who Have Sex with Men (MSM)

Whereas there was no threat to the social life of the previous participants, there is in the case of marginalized gay men and other men who have sex with men. The gay identity and lifestyle were illegal until the late 1990's. However, because of the traditional stress that Chinese families place upon their sons to marry, the gay men end up married and older men may engage in covert relations with other men. These would all suffer socially if their identity became known. Yet the number of such persons is high.

It has been established that over 200,000 gay men and MSM live in Chengdu (Wang et al., 2004) in the population of over 10 million. Many gravitated to Chengdu from elsewhere because of its large population and commercial tradition and its relatively tolerant social and political environment. It is also known (Wang, 1998) that official led programs have not reached into their social milieu.

The prevention approach taken by Gao (2005) used a different approach from the one used in our ethnic minorities studies. No official support could come from community records. Any effective intervention had to come from becoming accepted by the gay men themselves. It was important therefore to avoid a judgmental attitude. Melissa Gao's PhD was supervised jointly by myself and Prof Morgan from the School of Communication. Her field work was supported by the UK Fund and Ford Foundation.

Gao's theoretical approach was that of people-centered participatory communication (Selener, 1997). With this approach the researcher spends much time becoming well accepted in the research community before attempting any intervention. The approach means that the researcher becomes involved in the scene.

The Method

The study was conducted with a cohort of 160 males made up of gay men, MSM and MB (money boys and commercial sex workers) with an intervention group (80) and a comparison group (80) drawn from a comparable community. The intervention group was recruited from a number of sites, including gay bars, gay internet chat rooms and sites, male sex workers' cruising areas and through networks of friends. The members of the comparison group were located about 50-60kms away and identified through a pilot study as being reasonably comparable in MSM's sub-cultural characteristics, socio-economic and socio-geographic status.

The Pre Test-Post Test design was used as in the ethnic cross-cultural studies to evaluate the effects of participatory activities in promoting condom use. Members of the intervention group were pre-tested, were given the intervention program then tested again after approximately 5 months. Members of the comparison group were pre-tested, received no intervention and were tested again after 5 months. The questions were taken from the literature (Kippax et al., 1990) and the questionnaire used in our earlier work (Wang, 1998, 2002). All participants were interviewed individually.

The Interventions

A number of activities were conducted to develop safer sex practices. A gay bar based

series of melodramas on condom use was developed jointly with professional designers, gay volunteers and the researchers. Small media materials were created, including a logo, a glass coaster for the bar, and a making friend card. The logo was printed on posters and used in the bars and other public places, the coasters were used in the bars and supplied safer sex information and hotline telephone help numbers.

Activities, including sport, mah-jong, and card games, were introduced to encourage friendship and attracted those who did not frequent the gay bar. Usually the games were followed by group discussions. An important target was to increase the participants' self-esteem. They were encouraged to decorate the logo and posters in the bars to create a caring and loving environment among themselves, to link with the general society, make them feel there is a home for them and also help them to develop volunteer teams and build up their own capacities (Gao & Wang, 2007).

Results

The participants' demographic and social background t pre-test is shown in Table 5.

Table 5 Demographic and social characteristics of the participants within the Intervention and Comparison groups among MSM at pre-test *

	Intervention group n = 80 (%)	Comparison group n = 80 (%)	Total sample n = 160 (%)
Age			
< 17	2 (1.3)		2 (1.3)
18 ~ 24	38 (23.8)	35 (21.9)	73 (45.6)
25 ~ 29	16 (10.0)	22 (13.8)	38 (23.8)
30 ~ 35	10 (6.3)	14 (8.8)	24 (15.0)
> 35	14 (8.8)	9 (5.6)	23 (14.4)
Mean	26.64	25.12	25.88
$\chi^2 = 4.82$, $df = 4$, $p > 0.05$			
Current marital status (MAR)			
Married	12 (7.5)	20 (12.5)	32 (20.0)
Single	17 (10.6)	12 (15.0)	29 (18.1)
Divorced	4 (2.5)	4 (2.5)	8 (5.0)
Separated	38 (23.8)	41 (25.6)	79 (49.4)
Committed relationship / cohabiting	9 (5.6)	3 (1.9)	12 (7.5)
$\chi^2 = 5.98$, $df = 4$, $p > 0.05$			
Pattern of tricycle driver			
Self-employed business / employer	37 (46.3)	30 (37.5)	67 (41.9)
Employee	30 (37.5)	29 (36.3)	59 (33.9)
Joint venture	5 (6.3)	14 (17.5)	19 (11.9)
Unemployed / waiting for a job	6 (7.5)	5 (6.3)	11 (6.9)
DK/Unsure	2 (1.3)	2 (1.3)	4 (2.5)
$\chi^2 = 5.10$, $df = 4$, $p > 0.05$			
Monthly income (Chinese Yuan)			
¥ 500 or low	1 (0.6)		1 (0.6)
¥ 501 – 1000	17 (10.6)	18 (11.3)	35 (21.9)
¥ 1001- 3000	35 (21.9)	41 (25.6)	76 (47.5)
¥ 3001 – 5000	13 (8.1)	11 (6.9)	24 (15.0)

¥ 5001 – 10,000	6 (3.8)	6 (3.8)	12 (7.5)
¥ More than 10,000	4 (2.5)	4 (2.5)	8 (5.0)
No response / Don't know	4 (2.5)		4 (2.5)
$\chi^2 = 5.67$, $df = 6$ $p > 0.05$			
Education			
Never attended school			
Less than 3 years in primary school	4 (5.0)	3 (3.8)	7 (4.4)
Up to year 6 in primary school	4 (5.0)	8 (10.0)	12 (7.5)
Completed middle school	23 (28.8)	26 (32.5)	49 (30.6)
Completed high school	39 (48.8)	35 (43.8)	74 (46.3)
Completed college or university	10 (12.5)	8 (10.0)	18 (11.3)
$\chi^2 = 2.10$, $df = 6$, $p > 0.05$			
Sexual identity			
Gay / Homosexual	58 (72.5)	44 (55.0)	102 (63.8)
Bisexual	20 (25.0)	30 (37.5)	50 (31.3)
Heterosexual	2 (2.5)	3 (3.8)	5 (3.1)
Other		3 (3.8)	3 (1.9)
$\chi^2 = 7.12$, $df = 3$, $p > 0.07$			
Friends who are gay men or homosexual men (MSM)			
None	2 (2.5)	3 (3.8)	5 (3.1)
A few	8 (10.0)	7 (8.8)	15 (9.4)
Some	30 (37.5)	23 (28.8)	53 (33.1)
Most	36 (45.0)	44 (55.0)	80 (50.0)
All	4 (5.0)	3 (3.8)	7 (4.4)
$\chi^2 = 2.27$, $df = 5$, $p > 0.08$			
Free time spent with gay or homosexual friends *			
None	3 (3.8)	8 (10.0)	11 (6.9)
A few	14 (17.5)	18 (22.5)	32 (20.0)
Some	18 (22.5)	28 (35.5)	46 (28.8)
Most	45 (56.3)	26 (32.5)	71 (44.4)
DK/NR	1 (1.3)	2 (2.5)	6 (3.8)
$\chi^2 = 10.10$, $df = 4$, $p = 0.039$			
Enjoy having sex with men, women or both			
Men and women equally	12 (15.0)	8 (10.0)	20 (12.5)
Mostly men	18 (22.5)	23 (18.8)	41 (25.6)
Men only	40 (50.0)	35 (43.8)	75 (46.9)
Mostly women	8 (10.0)	7 (8.8)	15 (9.4)
Women only	2 (2.5)	4 (5.0)	6 (3.8)
No one		3 (3.8)	3 (1.9)
$\chi^2 = 5.47$, $df = 5$, $p = 0.36$			
Sexual relationships with men			
No sex with men at present			
All my sex with men is regular only	5 (6.3)	7 (8.8)	12 (7.5)
All my sex with men is casual only	8 (10.0)	13 (16.3)	21 (13.1)
All my sex with men both regular and casual	67 (83.3)	60 (75.0)	127 (79.4)
$\chi^2 = 1.91$, $df = 3$, $p = 0.58$			
Number of male partners in the past six months			
None			
One	2 (2.5)	4 (5.0)	6 (3.8)
2 – 3 men	7 (8.7)	9 (11.3)	16 (10.0)
4 – 5 men	12 (15.0)	18 (22.5)	30 (18.8)
6 – 10 men	24 (30.0)	22 (27.5)	46 (28.8)

11 – 20 men	18 (22.5)	13 (16.3)	31 (19.4)
20 +	17 (21.3)	14 (17.5)	31 (19.4)
DK / NR			
$\chi^2 = 7.32$, $df = 7$, p 0.066			

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.0001$
* Gao, M. & Wang, S., 2007.

It can be seen that they were of the same age range as in our previous studies, but were better off financially, in better employment than the previous groups, and had a much higher level of education than those in the previous study. Most identified themselves as homosexual, but a large number identified as bisexual. Friends were almost all homosexual, and their free time was usually spent with these men. The number of male partners for both regular and casual sex in the last six months was high.

Post-test changes after the intervention are shown in Table 6.

Table 6 Changes from baseline to post-test six months after the intervention

Knowledge, attitudes and safe/ unsafe sex among two groups *N = 160*	Pretest %	Posttest %	Observed Change, Between baseline and post-intervention, % (95% CI)	Differential Change between intervention and control, % (95% CI)
1. Correct knowledge rate about safe / unsafe sex [1]				
Intervention group	11.3	86.3	75.0 (59.1, 90.9)***	74.6 (59.7, 89.1)***
Comparison groups	10.8	11.2	0.4 (-0.7, 1.5)	
2. Rate of correct attitudes toward HIV-related information [2]				
Intervention group	16.3	87.5	71.2 (53.7, 86.2)***	70.0 (53.7, 86.2)***
Comparison groups	15.0	16.2	1.2 (-0.3, 2.1)	
3. Condom use with casual sexual partner/s [3]				
Always used condoms for vaginal sex with casual sexual partner/s				
Intervention (n=49)	6.1	73.5	67.4 (57.2, 77.6)***	65.5 (53.6, 74.8)***
Comparison (n=53)	3.7	5.6	1.9 (-5.1, 9.0)	
Always used condoms for anal sex with casual sexual partner/s				
Intervention (n=69)	4.3	76.8	72.5 (60.2, 84.8)***	71.2 (59.2, 83.4)***
Comparison (n=70)	2.9	4.2	1.3 (-4.5, 7.1)	
Always used condoms for oral sex with casual sexual partner/s				
Internvention (n=69)	1.4	15.9	14.5 (4.4, 24.6) **	
Comparison (n=70)				
4. Condom use with regular sexual partner/s [4]				
Always used a condom for vaginal sex with regular sexual partner				
Intervention (n=54)	7.4	40.7	33.3 (14.1, 52.5)***	31.4 (12.3, 50.5) ***
Comparison (n=53)	3.8	5.7	1.9 9-5.1, 9.0)	
Always used condoms for anal sex with regular sexual partner/s				
Intervention (n=65)	3.1	46.2	43.1 (22.1, 64.1)***	41.5 (21.3, 61.7)***
Comparison (n=63)	3.2	4.8	1.6 (-5.3, 8.5)	
Always used condoms for oral sex with regular sexual partner/s				
Internvention (n=68)	1.5	10.3	8.8 (1.4, 16.2)*	
Comparison (n=66)				

5. Change in sexual relationships				
All my sex with men is casual only in the past three months				
Intervention	10.0	5.0	-5.0 (-10.8, -0.85)*	13.8 (9.3, 18.3)*
Comparison	16.3	25.0	8.8 (2.2, 15.3)*	
All my sex with men is regular only in the past three months				
Intervention	6.3	46.3	30.7 (17.0, 44.4)***	27.7 (16.2, 37.2)***
Comparison	8.8	6.3	-3.0 (-5.9, 0.8)	
All my sex with men both is regular and casual in the past three months				
Intervention	83.8	48.8	-35.0 (.54.3, -15.7)***	38.8 (21.7, 55.9)***
Comparison	75.0	78.8	3.8 (-5.4, 13.0)	

[1] [2] Percentage is shown these numbers which has reached basic scoring standard in correct knowledge and at toward HIV/AIDS.

[3] Case numbers are those reported they ever have sex with casual sexual partner. 12 within participants have reported that they have regular sexual partner/s only.

[4] Case numbers are those who have reported they ever have sex with regular sexual partner. 21 within 160 participants have reported that they have vasual sexual partner/s only.

CI = Confidence Interval; * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

There were highly significant improvements in the intervention group, with almost no change in the comparison group, in all of the five aspects: correct knowledge, correct attitudes towards HIV related information, condom use with casual sex partners, and condom use with regular sex partners, together with a decrease in the number of casual sex partners in the previous three months.

HIV/AIDS Prevention with Female Sex Workers

Wang and Gao next turned their attention to the situation of female sex workers in the Tibetan and Yi ethnic communities.

Whereas in these poor areas the men were disadvantaged, they could move about freely in their work and traditionally had control over their lives, the female sex workers were disproportionably more vulnerable to STD and HIV and had few rights regarding reproductive health.

The important aim of this study was to help this group of disadvantaged women to improve their situation. Three gender focused approaches were employed: 1) improving discourse about the rights of FSWs in HIV prevention through story telling approach; 2) taking a participatory approach to help them adopt their own intervention methods, and 3) working towards achieving sustainability through integrating into local community health care policies.

The four model stories used previously were adapted to be relevant for women's situation.

Story 1: Focused on gender equalities for women to combat epidemics.
Theme – Women's rights in promoting reproductive health.

Story 2: Focused on the use of own discourse in combating the social stigma.
Theme – Using own language to combat discrimination in regard to reproductive

health, related beliefs and behavioural norms.

Story 3: Focused on own cultural strategy for combating AIDS.
Theme – Using peer-based oral story tradition.

Story 4: Focused on participant advocacy.
Theme – Using participatory communication in public policy discourse.

Method

Again a training group and an indirect training group were used with a comparison group post-test after 6 months.

Results

Results from pre-test to post-test for Yi, Tibetan and Han participants for changes in correct knowledge, correct attitudes towards HIV related information, and condom use with casual sex partners are shown in Table 7.

Table 7 Changes from baseline to poet-test after six months. *

Knowledge, attitudes and behaviour characteristics		Baseline, % (Pretest)	Post-Interve., % (Posttest)	Observed Change, % (95% CI)
Correct knowledge about safe / unsafe sex				
Indirect Training Groups	Yi (n = 50)	16.0	86.0	70.5 (54.6, 86.4)***
	Tibetan (n = 50)	18.0	88.0	70.0 (53.8, 86.2)***
	Han (n = 50)	22.0	90.0	68.0 (51.2, 84.5)***
Direct Training Groups	Yi (n = 50)	14.0	74.0	60.0 (46.1, 73.9)***
	Tibetan (n = 50)	18.0	80.0	62.0 (47.2, 76.8)***
	Han (n = 50)	22.0	90.0	68.0 (51.2, 84.5)***
Comparison groups	Yi (n = 50)	16.0	18.0	2.0 (-0.3, 4.3) n.s.
	Tibetan (n = 50)	14.0	18.0	4.0 (-0.9, 8.9) n.s.
	Han (n = 50)	24.0	22.0	-2.0 (-4.4, 0.4) n.s.
Correct attitudes toward HIV-related information				
Indirect Training Groups	Yi (n = 50)	20.0	84.0	64.0 (48.3, 79.7)***
	Tibetan (n = 50)	22.0	90.0	68.0 (51.2, 84.5)***
	Han (n = 50)	24.0	94.0	70.0 (53.8, 86.2)***
Direct Training Groups	Yi (n = 50)	16.0	72.0	56.0 (42.9, 69.1)***
	Tibetan (n = 50)	18.0	76.0	58.0 (43.7, 72.2)***
	Han (n = 50)	26.0	86.0	60.0 (46.1, 73.9)***
Comparison groups	Yi (n = 50)	14.0	16.0	2.0 (-0.3, 4.3) n.s.
	Tibetan (n = 50)	22.0	20.0	-2.0 (-4.4, 0.4) n.s.
	Han (n = 50)	22.0	26.0	4.0 (-0.9, 8.9) n.s.
Condom use with casual sexual partner/s				
Indirect Training Groups (n = 145)	Yi (n = 50)	2.1	36.1	34.0 (14.2, 53,8)***
	Tibetan (n = 50)	2.0	38.0	36.0 (16.2, 55,8)***
	Han (n = 50)	6.3	47.9	41.6 (19.3, 63.9)***
Direct Training Groups (n = 137)	Yi (n = 50)	2.3	27.9	25.6 (11.6, 39.6)***
	Tibetan (n = 50)	4.3	30.4	26.1 (12.2, 40.0)***
	Han (n = 50)	6.2	39.6	33.4 (14.0, 52.8)***

Comparison groups (n = 144)	Yi (n = 50)	2.2	4.3	2.1 (-0.4, 4.6) n.s.
	Tibetan (n = 50)	2.0	4.1	2.1 (-0.4, 4.6) n.s.
	Han (n = 50)	6.0	4.0	-2.0 (-4.4, 0.4) n.s.

CI = Confidence interval; n.s. = no significance
* $p < .05$; ** $p < .01$; *** $p < .001$

* Gao, M. & Wang, S., 2007.

Summary and Discussion

It is clear from the consistent results of these studies that the intervention strategies have been successful in enhancing the quality of life for these young men, whether married or single, heterosexual or homosexual, whether from a poor ethnic minority or from the Han majority background.

The use of the trained volunteers as agents for spreading the sexual health messages to others has had benefits for both the direct and indirectly trained. They not only increased their own knowledge but also took responsibility for the communication mode in their own language styles. There was plenty of evidence that they enjoyed the experience immensely. For example, the trishaw drivers displayed their message sheet and red ribbon on their vehicles. Also, unasked for by the researchers, they reduced their number of casual sexual partners.

The young gay men were particularly sensitive to the social stigma and the demands of their families. Many had come to Chengdu from distant cities to escape from their home environment. The program gave them friendship and a positive sense of their own self worth which showed itself in their enthusiasm to appear in the performances and work for the benefit of their group.

Another outcome was the large number of others contacted, now running into several thousand. Local community leaders asked for more.

The work with female sex workers is taking a new focus which is also relevant to other women empowering them to demand their own say in discussions and policy about reproductive health. It must be kept in mind that the contraceptive pill is out of reach for these poor communities.

One of the major aims of the research was to develop a culturally relevant program which could be adapted in a number of differing cultural setting. The measure of success in Sichuan suggests that these methods may be adaptable to a wider range of cultures and countries, especially multicultural countries such as are common in South East Asia.

Sadly, I cannot give you any results from the Qiang ethnic community. Based around the town of Wen Chuan and nearby villages, they were at the epicentre of the disastrous earthquake which engulfed the region in May 2008. Wang Shuguang and Melissa Gao have enjoined the volunteers in the reconstruction work.

The Chinese-Australia Centre for Cross-Cultural Studies

One of the outcomes of these studies was a proposal by our colleagues at Sichuan University, (with whom Wang Shuguang has had a long and close association) to establish a China-Australia Centre for Cross-Cultural Studies. The Centre is now established under the leadership of Professor Deng Shengqing and Dr Wang Shuguang as Co-Director. "Australia" so far means the University of Newcastle, however, it may well be that, in the future, this Centre will also attract participation from other Asian countries.

References

1. Ajzen, I. & Fishbein, M. (1994). *Understanding attitudes and predicting social behaviour.* Englewood Cliffs, NJ: Prentice Hall.
2. Bandura, A. (1994). Social cognitive theory and exercise of control over HIV infection. In R.J. DiClemente & J.L. Peterson (eds.), *Preventing AIDS: Theories and Methods of Behaviour Interventions* (pp. 25-29). New York: Plenum Press.
3. Gao, M. Y. & Wang, S. (2007). Promoting gender-focused discourse right in reproductive health for female sexual workers (FSWs) among ethnic Tibet and Yi communities, China. Fourth Asia Pacific Conference on Reproductive and Sexual Health and Rights; Hyderabad, India, Oct. 29-31.
4. Gao, M. (2005). *Participatory communication research and HIV/AIDS control: A study among gay men and MSM in Chengdu, China.* PhD Thesis, University of Newcastle.
5. Gao, M. Y. & Wang, S. (2007). Participatory communication and HIV/AIDS prevention in Chinese marginalized (MSM) population. *AIDS Care, 19(6),* 799-810.
6. Ma Yin (ed.) (1999). *(China's minority nationalities in Beijing: Foreign Languages Press.)*
7. Selener, D. (1997). *Participatory action research and social change.* New York Cornell University.
8. UNCHINA (1999). *Current status of HIV in China.* Retrieved from http://www.unchina.org/unaids/ekey3right1.html Accessed on December, 1999.
9. UNCHINA (2003). *Current status of HIV in China.* Retrieved from http://www.unchina.org/unaids/ekey3right1.html Accessed on December, 2003.
10. Wang, S. (2002). Strategic responses for HIV prevention among gay men and MSM in China. Paper presented at the People's Forum on Partnership to Fight HIV/AIDS. *United Nations Economic and Social Commission for Asia and the Pacific.* Bangkok, Thailand, Oct. 15-17.
11. Wang, S. (1998). *STD and AIDS-related risk-taking sexual behaviour within the dual employment system in China.* PhD Thesis, University of Newcastle.
12. Wang, S. & Keats, D. (1999). Promoting health and preventing HIV/AIDS in the dual social system in China. In M. MacLachlan (ed.). *Cultivating Health: Cultural Perspective on Promoting Health.* Chichester: John Wiley & Sons.

13. Wang, S. & Keats, D. (2005). Developing an innovative cross-cultural strategy to promote HIV/AIDS prevention in different ethnic cultural groups of China. *AIDS Care – Psychological and Socio-Medical Aspects of AIDS/HIV, 17,* 874-891.
14. Wang, S. & Keats, D. (2007). Cross-cultural approach as a new frontier in promoting sexual health and rights among ethnic communities in China: A six year longitudinal study. Fourth Asia Pacific Conference on Reproductive and Sexual Health and Rights; Hyderabad, India, Oct. 29-31.