

# The internet is an effective means of providing sex and reproductive health education to young people in Shanghai, China

## Context

An increasing number of young people in China is engaging in sexual relations before marriage and the age at sexual debut in the country is declining. However, most young people (10–24 years) continue to lack basic sexual and reproductive health knowledge and skills to negotiate safe sexual practices. Moreover, sex education itself, and the channels of communication that are best suited for providing it for unmarried young people, remain controversial in China.

In recent years, the Internet has emerged as an important medium in China for information dissemination, especially for young people. In 2004, an estimated 87 million people used the Internet in China; 54% of them were below the age of 25 years. In large cities such as Beijing and Shanghai, the percentage of young people using the Internet is even higher. This pioneering study evaluated the potential of the Internet as a means of providing sex and reproductive health education to young people in China.

## Objective

Launched in 2003, the study aimed to assess the feasibility and effectiveness of sex and reproductive health education for young people conducted through the Internet.

## Methods

The research was conducted in two high schools and four colleges in a science and engineering university in Shanghai. One high school and two colleges were selected as the intervention group and the rest served as the control group. Baseline surveys were conducted among students in the two groups to assess individual sexual and reproductive health knowledge, attitude to contraception, and sexual behaviour. The intervention group was then introduced to a specially designed web site entitled (literal translation) “Flying youthhood”, which offered sexual and reproductive health knowledge and service information, ten educational videos, professional counselling through email and a bulletin board for group discussions and exchange of information and experiences. The web site was password-protected to ensure that only the intervention group could access it. Students in the intervention group were invited to visit the web site as often as they wanted during the 10-month intervention period. The control group did not have access to the special web site, but received information on sexual and reproductive health in school and/or through other media available to the general public. At the end of the intervention period, a follow-up survey was conducted, which re-evaluated the two groups’ knowledge, attitudes and behaviour.



## Attitudes favouring the provision of contraceptives

At baseline, about half of all students in both groups had disagreed with the statement that: “Providing contraceptives to young people will encourage them to have sex.” At the end of the intervention period, attitude to this statement among the students in the intervention group changed significantly; in the control group attitude to the statement remained almost the same. After the intervention period, 64% of the intervention group, compared with 56% in the control group, disagreed with the statement and reported attitudes favouring the provision of contraceptives to sexually active young people.

## No change in sexual behaviour

Consistent with research findings from many parts of the world, this study found that there were no significant differences between the intervention and control groups in terms of sexual behaviour, and after the intervention period there was no significant increase in such behaviours as hugging, kissing, petting or sexual intercourse among the students in the intervention group.

**Table 1.** Median knowledge scores at baseline and post-intervention in the intervention and control groups

Knowledge	Intervention group		Control group	
	Male	Female	Male	Female
<b>Reproduction</b>				
Baseline	59.1	54.6	63.6	54.6
Post-intervention	81.8*	81.8*	63.6	63.6
<b>Contraception</b>				
Baseline	27.3	18.2	24.2	21.2
Post-intervention	51.5*	42.4*	30.3	27.3
<b>Condom</b>				
Baseline	66.7	55.6	66.7	55.6
Post-intervention	88.9*	77.8*	66.7	66.7
<b>STIs</b>				
Baseline	55.6	44.4	55.6	44.4
Post-intervention	77.8*	63.00*	59.3	51.8
<b>HIV/AIDS</b>				
Baseline	85.0	82.5	85.0	85.0
Post-intervention	90.0*	90.0*	85.0	85.0

\*P < 0.0001 determined by the Wilcoxon test between the intervention and control groups.

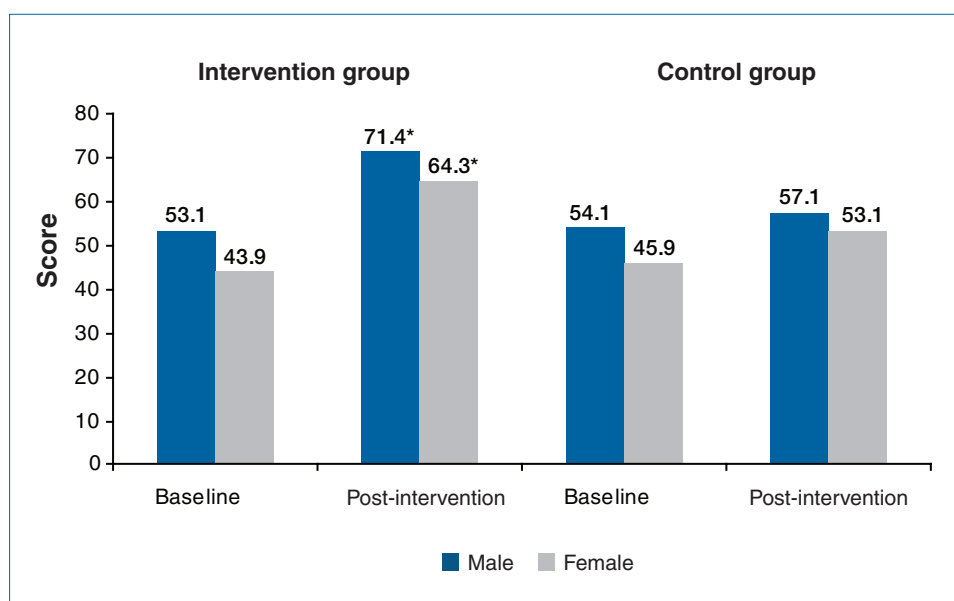
## Results

Altogether, 1337 students participated in the study (624 in the intervention group and 713 in the control group). Students in both groups were broadly similar in terms of socioeconomic background characteristics. At baseline the high school students were 15–16-year-olds and the college students were between 18 and 19 years of age. 97% of those interviewed at the baseline in both the intervention and control groups were re-interviewed in the second survey. Most of the students (67%) in the intervention group browsed the web site at least once a month during the intervention period and 94% ever-browsed it. Overall, the study found that about 44% of young people in the study access the Internet at their school or college, 36% at home and the remaining 20% at the Internet cafés.

### Improved knowledge

The percentage increase in total knowledge scores (a composite index with a maximum value of 100 based on a series of questions ascertaining correct knowledge) was almost three times greater in the intervention than the control group (Fig. 1). Males' and females' knowledge scores showed similar changes, although there were significant differences between them. Knowledge about reproduction increased most significantly after the intervention, followed by knowledge about sexually transmitted infections (STIs), condoms and contraceptives (Table 1).

**Figure 1.** Overall knowledge score on sexual and reproductive health, by group and timing



\*P < 0.0001 determined by the Wilcoxon test between the intervention and control groups.

## Conclusions

- In China, the provision of sex education via the Internet is feasible and effective in improving awareness of sexual and reproductive matters.
- Sex education renders youth more favourable towards the provision of contraceptives to sexually active unmarried young people.
- The study refutes fears that sex education will encourage sexual activity: improved knowledge and more favourable attitudes towards the provision of contraception to the unmarried did not lead to an increase in sexual behaviours.
- Sex education via the Internet was regarded by the users as private, convenient and user-friendly, offering flexibility to view and discuss issues of interest and relevance to each individual.

## Impact

The study has already had a major impact in Shanghai. At the end of the study in April 2004, the web site was opened to the public and has since recorded, on average, 4000 hits per month. Other notable impacts of the study include:

- The city's education department has integrated the Internet web site into its "life education" programme for students in secondary schools.
- Over 20 national and local newspapers and television stations carried a series of reports informing the public about the Internet web site.
- The number of people seeking counselling by email and posting discussion points has increased rapidly since the web site was opened to the public.

## Reference

Chao-hua Lou, Quan Zhao, Er-sheng Gao and Iqbal Shah. Can the Internet be an effective way to conduct sex education for young people in China? *Journal of Adolescent Health*, 2006, 39:720–728.

## Further information

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