

Health Promotion Strategies among sex workers in Singapore

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Outline of my presentation

- **Background of sex work in Singapore**
- **Health Promotion Strategies**
- **Effects on condom use and STIs**
- **Conclusion**

Sex workers in Singapore

Brothel-based or free lance

- **1,100 brothel-based workers**



Medical Surveillance scheme: Regular screening for sexually transmitted infections



Female brothel-based sex workers



**Department of STI Control Clinic
which provide regular screening for STIs**

Needs assessment (2)

Qualitative study on condom use negotiation

Difficult clients:

- young unmarried carefree clients who do not think about the repercussions of not using condoms
- older clients who do not worry about death
- regular clients who trust the sex workers to be safe
- clients who feel they cannot function with condoms

Objective

- **Develop a sustainable program to increase consistent condom use to at least 90% and prevent sexually transmitted infections/HIV/AIDS among female brothel-based sex workers in Singapore**

The Intervention: Health Promotion Strategies

The intervention program: Theoretical base

1. Green's *PRECEDE PROCEED* framework

- ***motivate*** by relating condom use to what they value
- ***enable*** them to negotiate condom use (skills)
- ***support*** them: brothel owners, health staff, peers

2. Bandura's social learning theory: self efficacy

- **develop their confidence and skills**

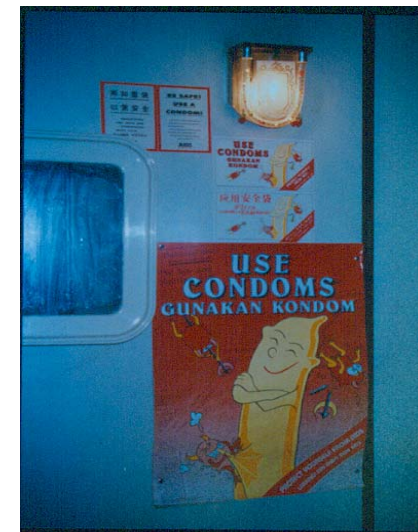
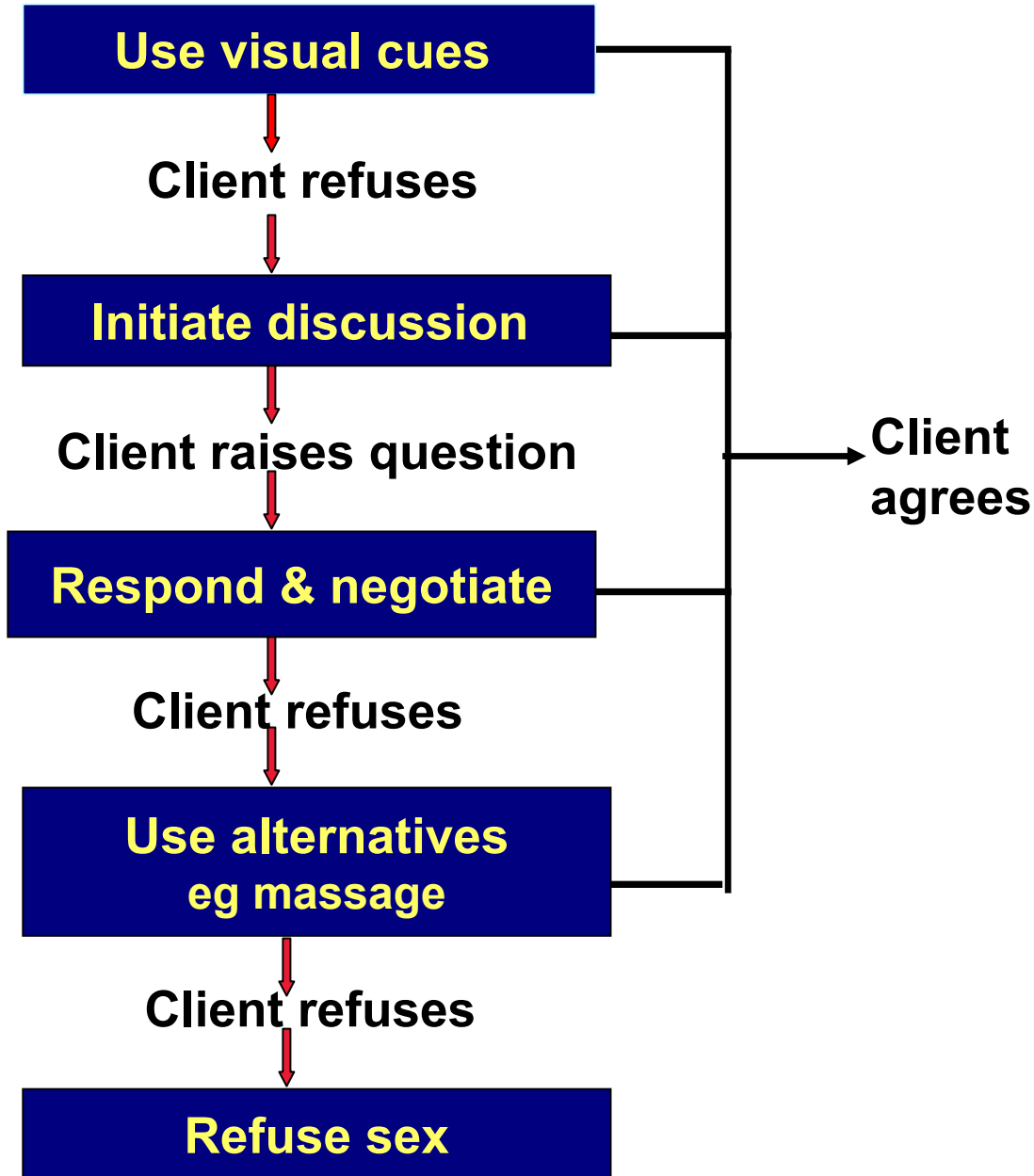
Bandura's Social learning Theory



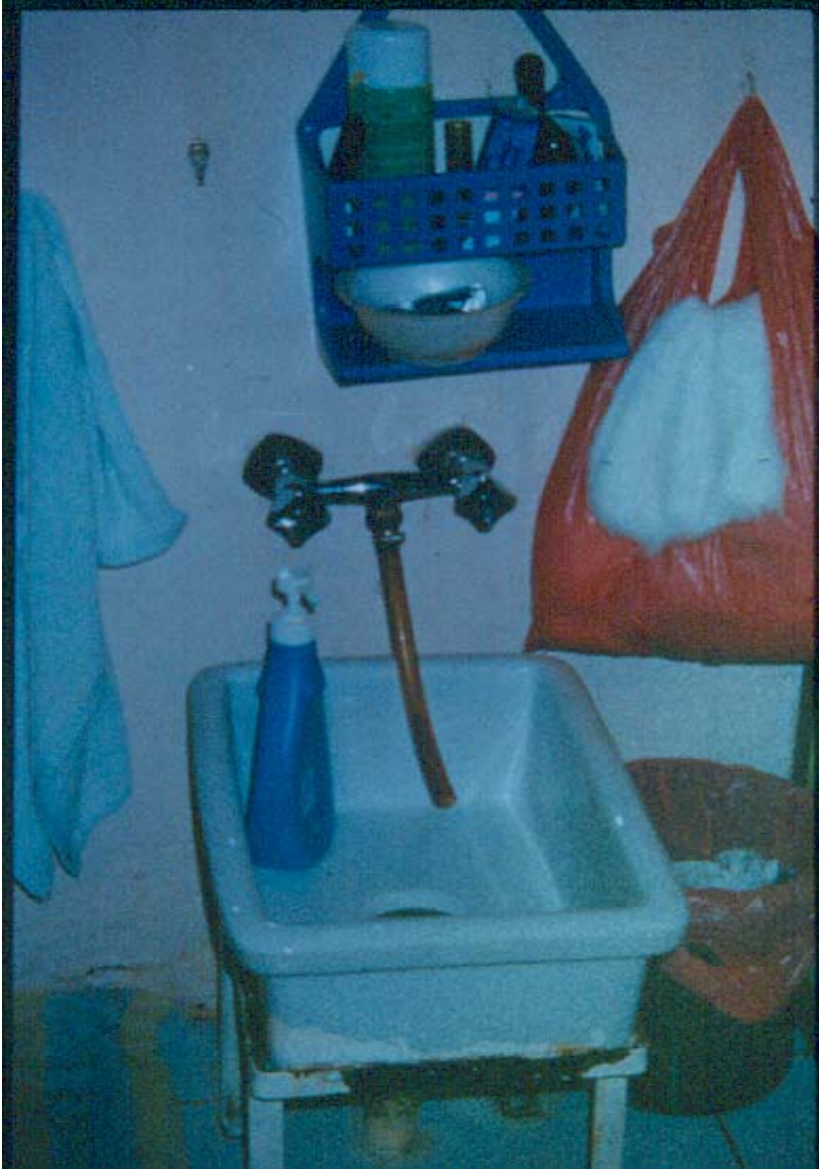
Self efficacy (confidence) and skills

- **observe peers doing it**
- **divide task in sub-tasks**
- **practice each sub-task through role-play**

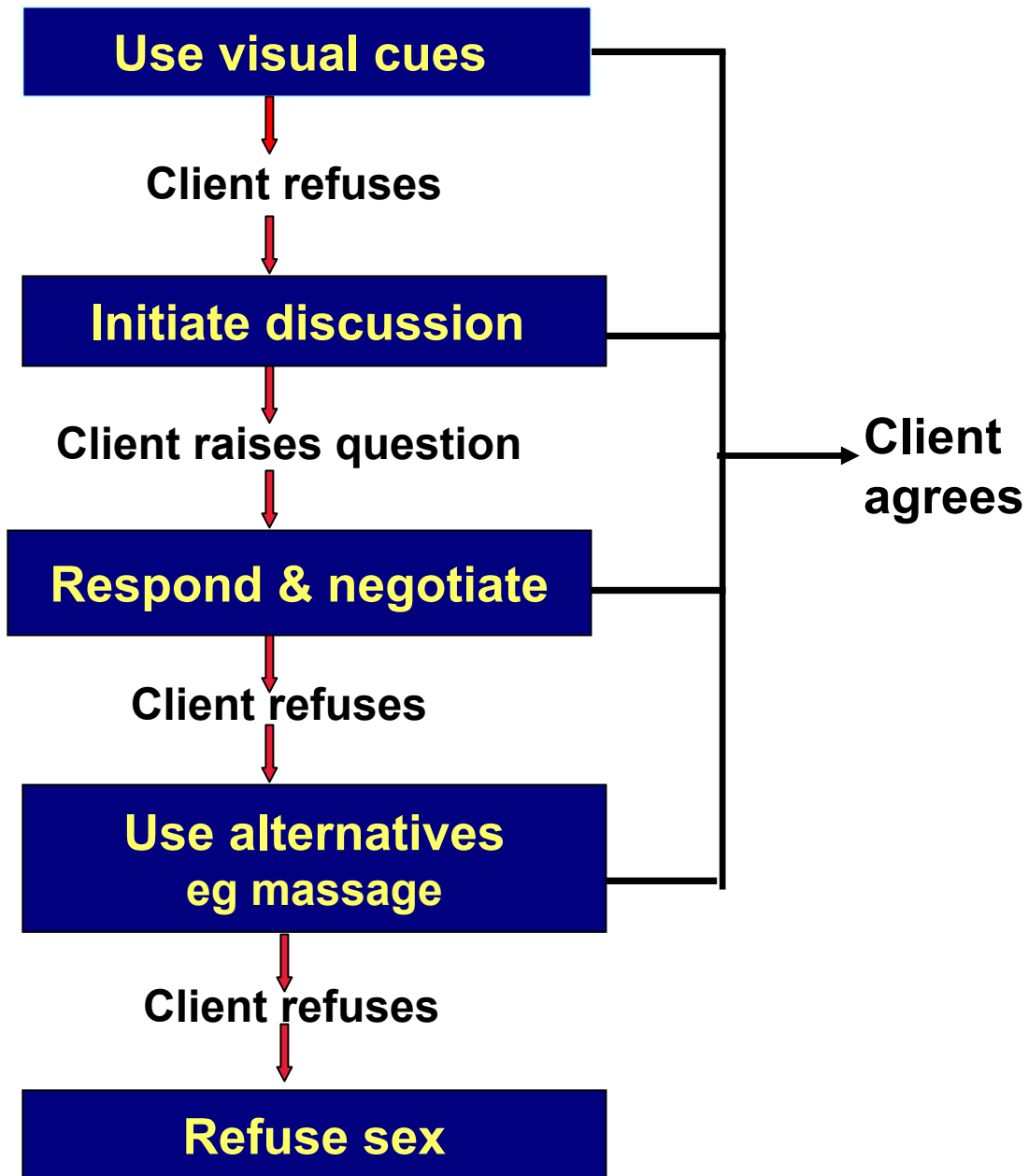
How to negotiate condom use



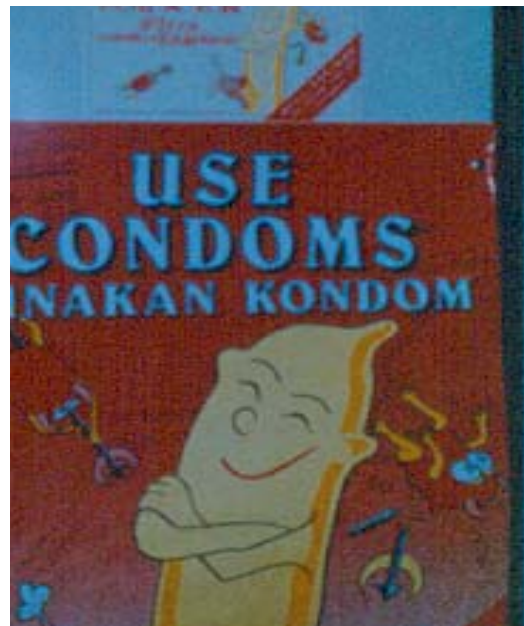
Visual cues to prompt clients to use condoms



How to negotiate condom use



Condom promotion program for vaginal sex: Strategies and activities

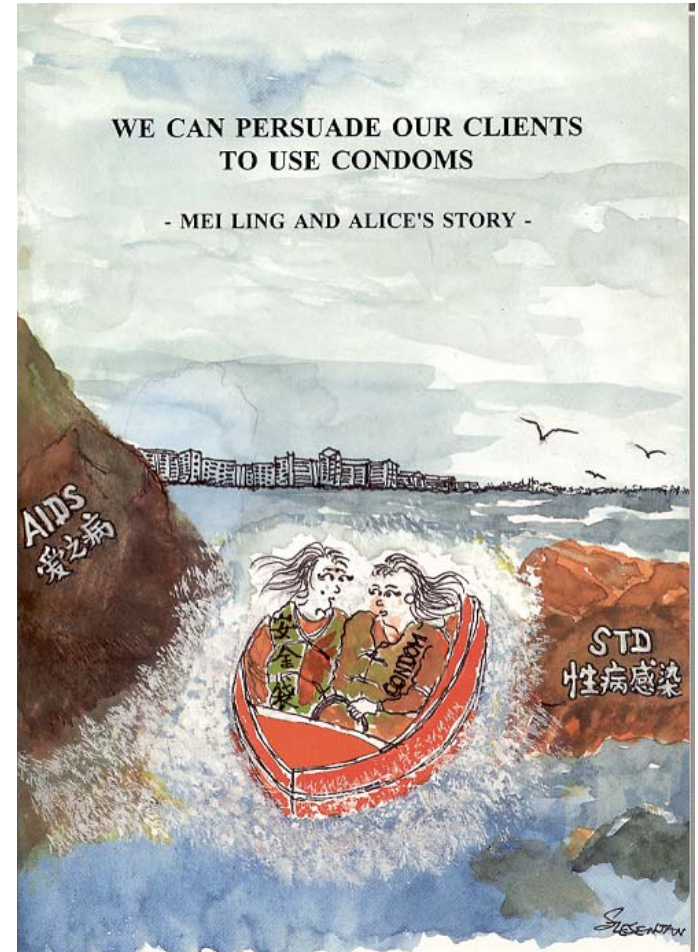


Program Activities (1)

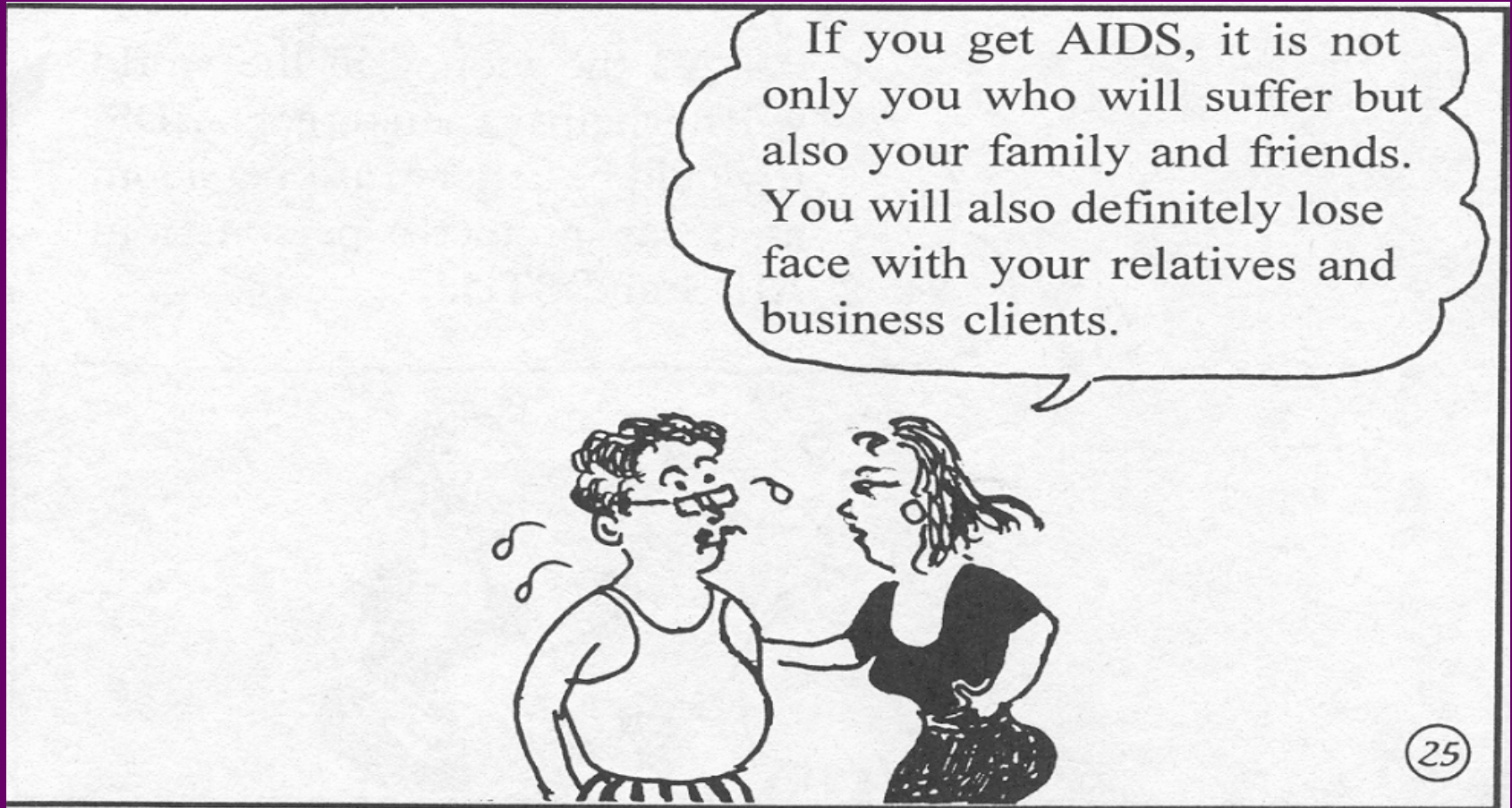
sex workers



- **Health education talks**
- **Skill development sessions**
-video clips on negotiation skills
- **Comic booklets**
- **Screening and treatment**



Persuade client to use condoms: focus on family values



Program Activities (2)

sex workers



**Regular meetings with peer leaders
to discuss problems and solutions**

Program Activities

Brothels

- Talks on AIDS/STIs and benefits of STI-free brothel



- Provide posters on 100% condom use
- Check on compliance with poster display
- Apply administrative measures
Brothels with high STS rates, suspend from business

Program Activities

Health staff

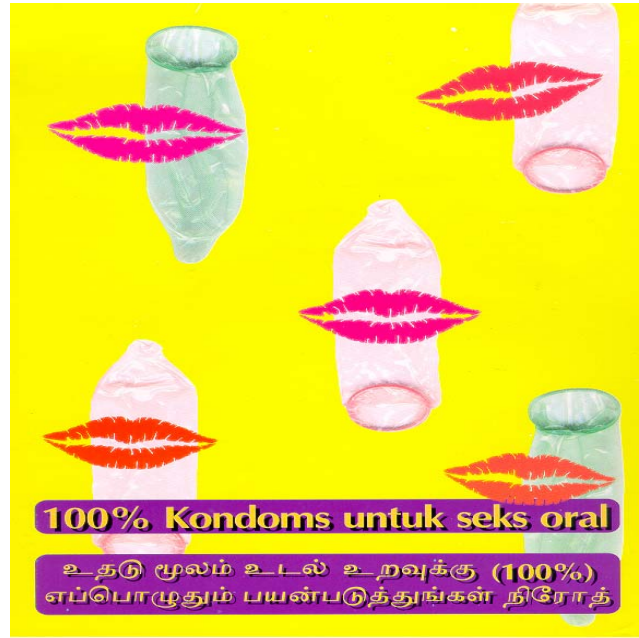


Training on behavioral approaches
Regular feedback of survey findings



Group problem-solving sessions

Condom promotion program for oral sex (1996)



Summary of research findings: Condom use for oral sex

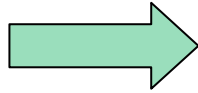
- **Only 37.5% of newly recruited sex workers consistently used condoms for oral sex although three quarters (77.4%) consistently used condoms for vaginal sex**
- **Main reasons for not using condoms for oral sex**
 - **Perceptions of oral sex as safe sex**
 - **Misconceptions that pre-ejaculatory fluid does not contain bacteria/viruses**
 - **Lack negotiation skills**
 - **No support from brothel keepers and peers**
 - **Unpleasant taste and throat itchiness**

Source: Wong ML, Chan RKW, Wee S. Health Educ Behav 2000; 27:502-16.

Wong ML, Chan RKW, Koh D, Wee S. Sex Transm Dis 2000; 27:39-45.

Program activities

Sex workers



Talks
Video demonstration of negotiation skills
Skills development
Group problem solving
Individual counseling
Distribute comic scripts and stickers

Health staff



Feedback
Team problem solving

Brothels



Talks
Distribute posters on 100% condom use
Enforcement measures
Check on brothels' compliance

Display of posters on oral sex in the brothels



Always use condoms for oral sex

Video clip: How to use condoms for oral sex



**Were these interventions effective?
Effects**

Evaluation design

- **Phase I**

Pretest-posttest control group for 5 months

Intervention group O_1 **X** O_2

Control group O_1 O_2

- **Phase II (1990-2001): Time series design**
compare trends in condom use and gonorrhoea
over time before and after program implementation

1990-1994

o o o o o o o o o o

X

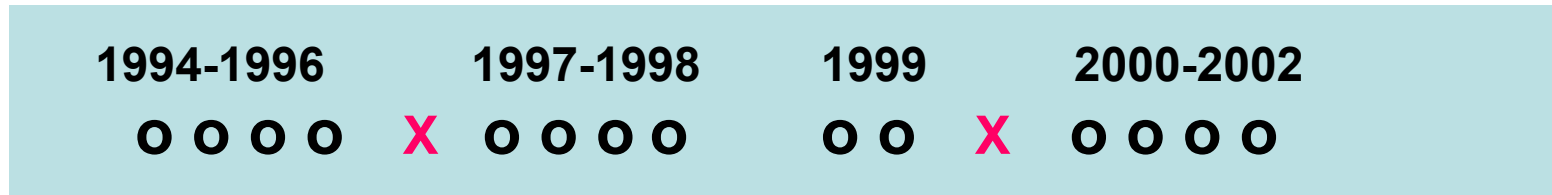
1995-2001

o o o o o o o o o o

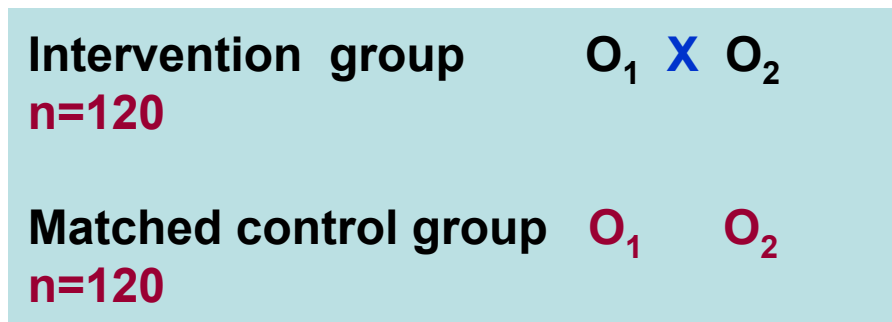
Evaluation design

- Interrupted time series design (1994-2002)

Compare trends in post-intervention **oral condom use** and **pharyngeal gonorrhea** across cross-sectional samples before and after program implementation and when brothel intervention activities were withdrawn and subsequently applied

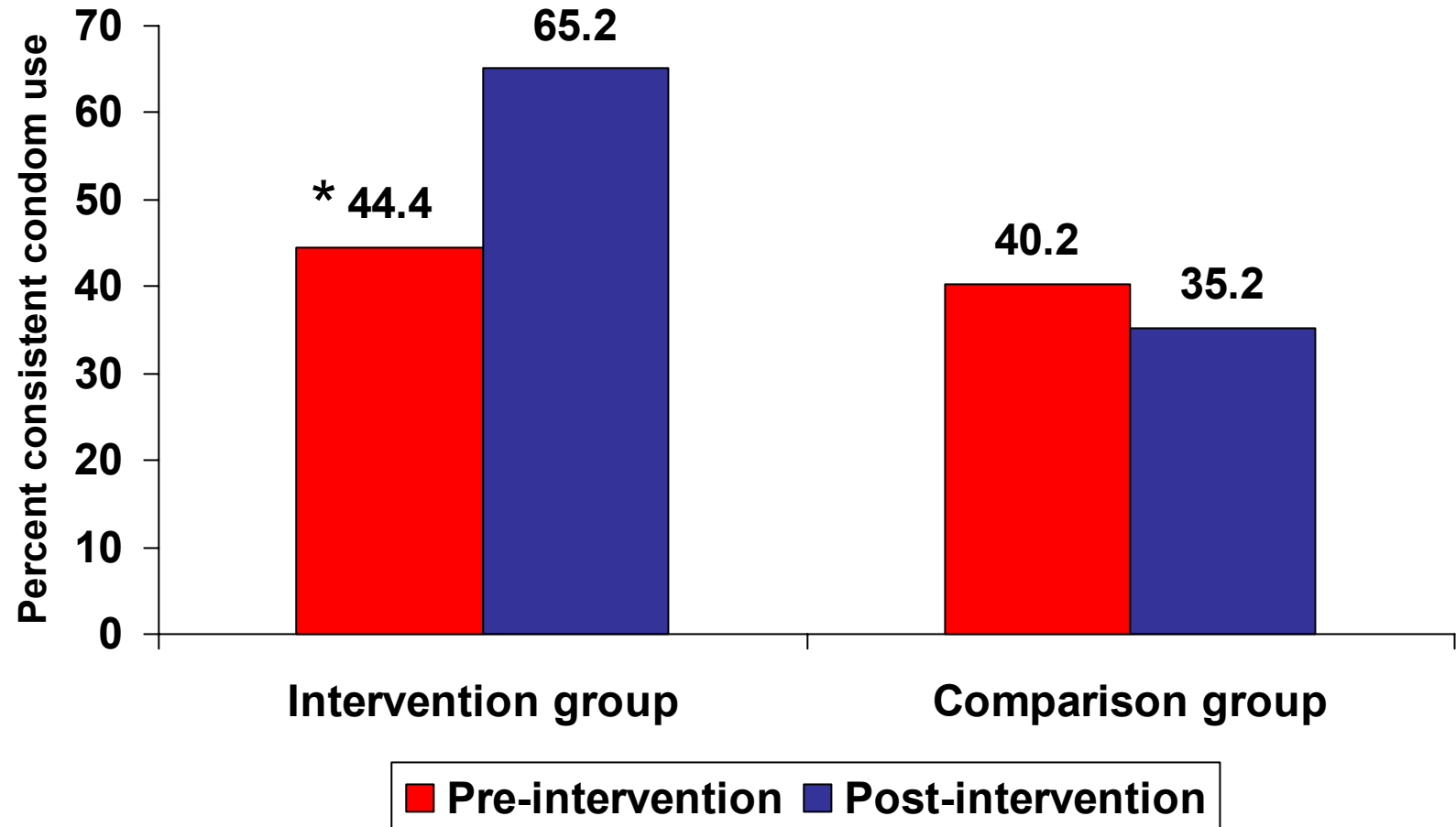


- Pretest-posttest matched control group design (2000)



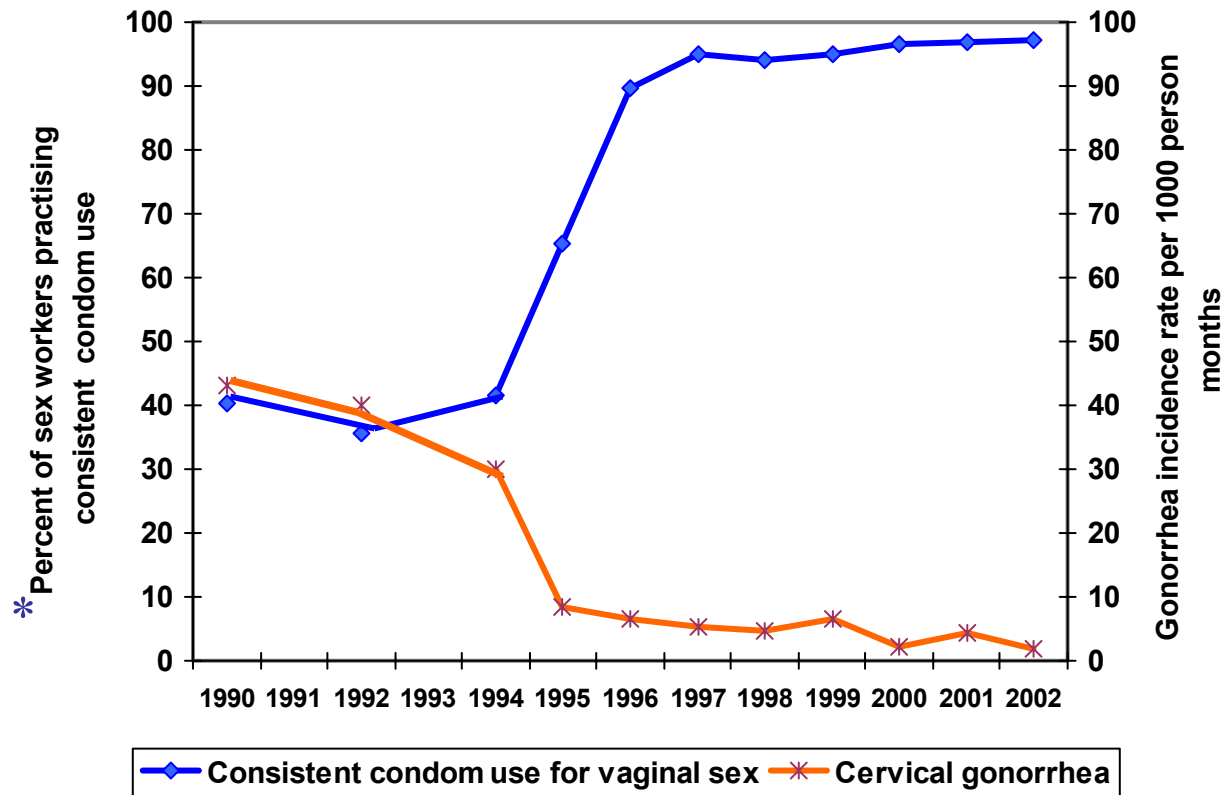
Condom promotion program for vaginal sex

Figure 1: Effects of intervention on consistent condom use



*McNemar $p < 0.01$

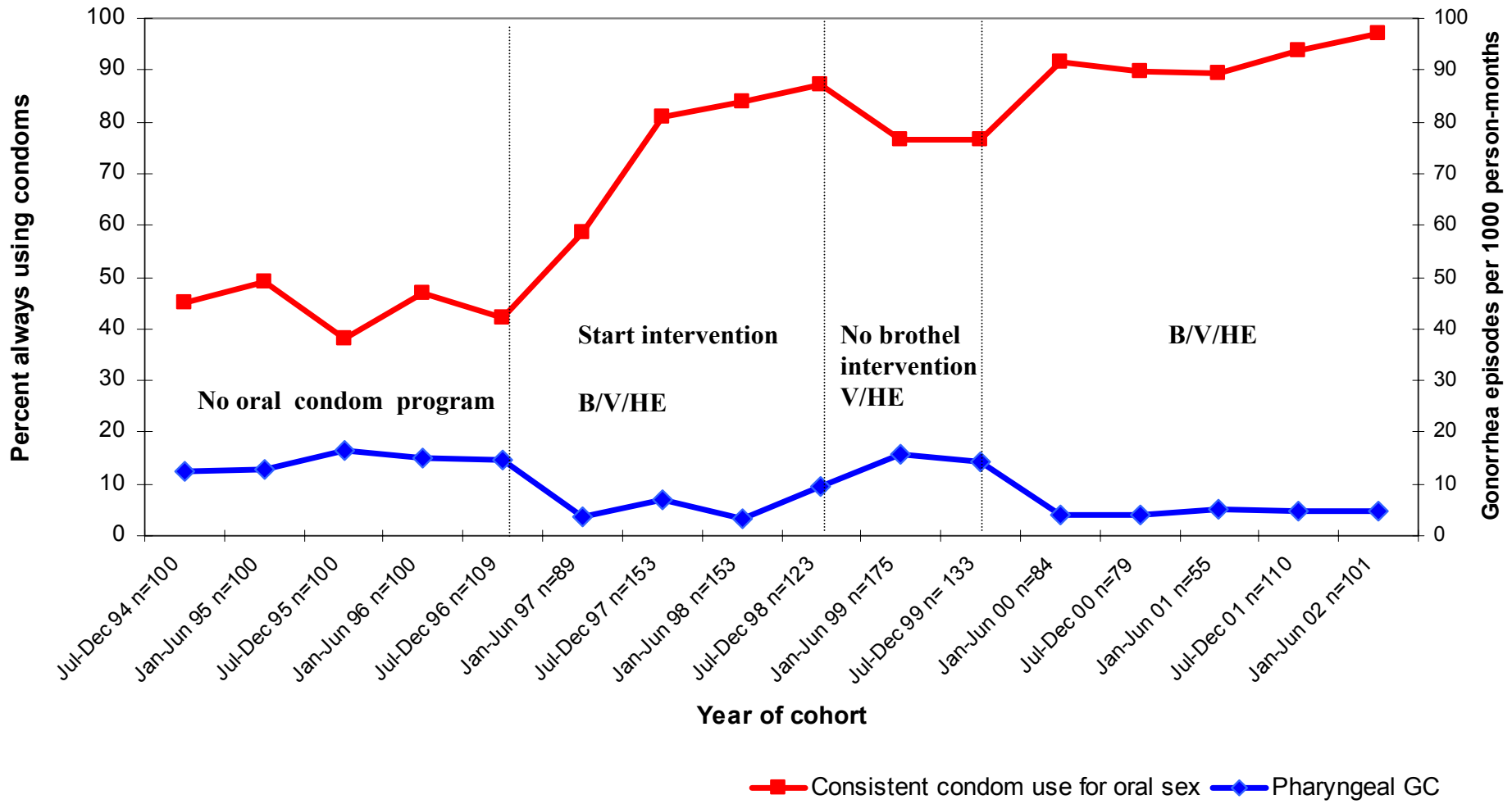
Figure 2. Trends in consistent condom use for vaginal sex and cervical gonorrhoea incidence rates among sex workers in Singapore, cross-sectional surveys 1990-2002



*Source: Wong ML, Chan RKW, Koh D. AIDS 2004 (in press)

Condom promotion program for oral sex

Figure 3: Effects of interventions on trends in consistent condom use and pharyngeal gonorrhoea, 1994 - 2002



B-brothel intervention activities eg talks, brothel checks
 V-video sessions for sex workers
 HE-health education talks for sex workers

Table 1: Consistent condom use for oral sex and pharyngeal gonorrhoea incidence at baseline and at 6 months follow-up in intervention and matched control groups, Singapore, 1999-2000

Outcome measure	Intervention Group	Control Group	Intervention versus control	
			Observed risk ratio	Adjusted risk ratio
% who consistently use condoms for oral sex				
Pre-intervention	81.7*	81.7*		
Post-intervention	92.5*	70.0*		
Incidence rate of gonorrhoea at 6 months follow-up (per 100 person months)				
	0.42	1.94	0.21 (0.06-0.72)	0.22 (0.06-0.78)

p<0.05

Factors leading to sustained condom use

Input

Knowledge

- Application of health promotion model incorporating: behavioral, social, educational and management sciences

Manpower

- Trained staff and committed manager

Facilities

- Available facility to conduct health education
- Brothels with policies to safeguard sex workers' safety
- Available and affordable condoms

Process

Assess and act promptly on causes of non-condom use

- Teach negotiation skills
- Conduct problem solving sessions
- Target administrative measures on brothels

Monitor program activities

Feedback to staff and sex workers

Involve staff and sex workers

Output

High sustained condom use
Condom use accepted as a norm
Sustained decline in gonorrhoea

Adaptation of program beer promotion girls, Siem Reap, Cambodia



Strategies focused on training peer educators to teach condom negotiation skills to beer girls

Findings

- **Consistent condom use increase from 65.2% pre-intervention in 2002 to 89.4% after 2 years in 2003.**
- **HIV incidence decreased by more than 3-fold from 14.7% to 4.7% post intervention.**

Conclusion

- **Condom promotion programs for vaginal and oral sex in Singapore led to sustained high levels of consistent condom use of more than 90%, with corresponding declines in cervical and pharyngeal gonorrhea after 8 and 6 years of their implementation**
- **Adaptation of program to Cambodia led to increase in condom use and decline in HIV incidence**
- **Programs' success attributed to:**
 - **Quantitative and qualitative methods to identify needs**
 - **Health promotion strategies to change behavior and environment**
 - **Involvement of sex workers and health staff**
 - **Quality improvement principles to monitor and take prompt action**