

## RESEARCH COMMUNICATION

# Smoking Cessation Rate 12 months after a Group Counseling Program in Mongolia

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### Abstract

Mongolia is one of the top ten countries with the highest smoking rates of men and women combined, so that tobacco control, especially creating effective smoking cessation programs, is essential issue of the government. The present study aimed to assess an effectiveness of a free group counseling program by trained medical doctors and health educators based on "5A" (Ask, Assess, Advise, Assist, and Arrange) with 12 months follow-up in 2002 and 2003. Participants were 517 smokers with an intention to quit smoking in three big cities (Ulaanbaatar, Darkhan, and Erdenet). We found that 65.0% of them were not smokers 12 months after the program. The cessation rate was significantly higher in 2003 than in 2002, indicating that the effectiveness of the program had improved over time. Group counseling based on the "5A" approach by medical doctors and health educators seems effective for smokers with an intention to quit smoking. The present approach may be more appropriate in Mongolian conditions than nicotine replacement therapy .

**Key Words:** Smoking cessation - group counseling - "5A" approach - intention to quit

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### Introduction

Mongolia is one of the top ten countries with highest smoking rates of men and women combined (Mackay and Eriksen, 2002). According to a survey conducted by ADRA (Adventist Development and Relief Agency) in Mongolia, the smoking rate was 65% among men aged 15 years and over and 21% among the corresponding women (ADRA in Mongolia, 2004), indicating that almost half of the Mongolian population are smokers, and therefore at elevated risk of diseases and premature death.

As in many other countries, the Government of Mongolia is combating the smoking epidemic through strengthening the legal environment on tobacco control and mass population approaches to persuade smokers to stop smoking rather than smoking cessation programs for nicotine addicts who need help. As a result, a four-year survey (ADRA in Mongolia, 2003) showed that approximately half of the smokers wanted to quit and their desire to quit had been increased from 46.4% to 63.5%, although 48.1-54.5% of smokers responded that it was not easy to actually stop smoking.

However, effective programs exist in many countries. In order to create effective programs for tobacco dependents, the Ministry of Health and ADRA with the financial support of AusAID (Australian Agency for International Development), ran a smoking cessation program in the three

big cities in 2002 and 2003. We here report the cessation rate after the program and assess effectiveness of the free group counseling program.

### Subjects and Methods

#### *Subjects*

After receiving a lecture about tobacco harm, ways to overcome it and importance of the tobacco cessation in the health institutions and workplaces of participants, a total of 517 smokers (447 males and 70 females), with an intention to quit were registered voluntarily and participated in the cessation program. They were from 16 to 57 years old.

#### *Preparation of trainers*

In 2000, core 16 facilitators selected from medical doctors and health educators were trained in Ulaanbaatar. The core facilitators conducted further training of trainers in selected institutions of three cities.

#### *Cessation program*

Five days smoking cessation program based on "5A" approach (Fiori et al., 2000; Zwar et al., 2004) modified from Australian smoking cessation program was provided in the selected three cities in 2002 and 2003. The program was free of charge for participants and main methods were group counseling, and face to face interactions with smokers.

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An each group consisted of 12-16 participants. Scope of training included information on tobacco or health, needs to quit, ways to overcome smoking behavior; problem solving and individual plans for behavioral modification, adjusting to become non-smoker and setting a quit date. The smoking cessation training program was the same in each group, but trainers were different.

*Follow-up*

Participants were followed up by telephone at 1, 3, 6, and 12 months after the program. During the cessation program and follow-up period, educational materials and consultations were provided freely for the participants. The core facilitators concentrated efforts on training of trainers, managing the whole process of the training and collection of the follow-up data.

*Statistical analysis*

The data was analyzed by a chi-square test with version 7.0 of the STATA computer software (STATA Corporation, College Station, TX) .

**Results**

Among 517 participants 336 were non-smoker at 12 months after the cessation program. As shown in Table 1, the cessation rate was higher in Erdenet than in other 2 cities. The cessation rate of 2 years during the follow-up period was gradually decreased from 70.6% at the first month to 65% at the 12th month.

Figure 1 shows the cessation rates after follow-up in 2002 and 2003 separately. The proportion of the participants who are still not smoking after one year was relatively high in both years. However, the cessation rate was significantly higher in 2003 than in 2002 ( $p < 0.01$ ).

We compared the quit rate in follow-up months in the capital city and other 2 big cities in Figure 2. The participants from the capital city were less likely to quit than smokers of the other 2 cities. Differences in the quit rate among the areas is very significant. ( $p < 0.01$ ).

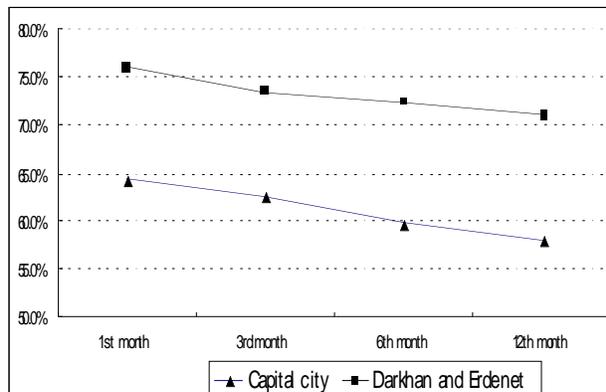
**Table 1. Cessation Rate during the Follow-up Months (2002 and 2003)**

City	Year	Participants	Cessation rate (%)			
			1	3	6	12
Ulaanbaatar	2002	90	51.1	47.8	43.3	44.4
	2003	148	72.3	71.6	69.6	66.2
	2002/3	238	64.3	62.6	59.7	58.0
Darkhan	2002	45	44.4	44.4	44.4	42.2
	2003	60	75.0	73.3	76.7	71.7
	2002/3	105	61.9	60.9	62.9	59.0
Erdenet	2002	64	88.8	80.4	84.1	84.4
	2003	110	81.8	80.9	74.5	74.5
	2002/3	174	84.5	81.0	78.2	78.2
Total	2002	199	61.8	57.8	56.8	56.8
	2003	318	76.1	75.2	72.6	70.1
	200/3	517	70.6	68.5	66.5	65.0

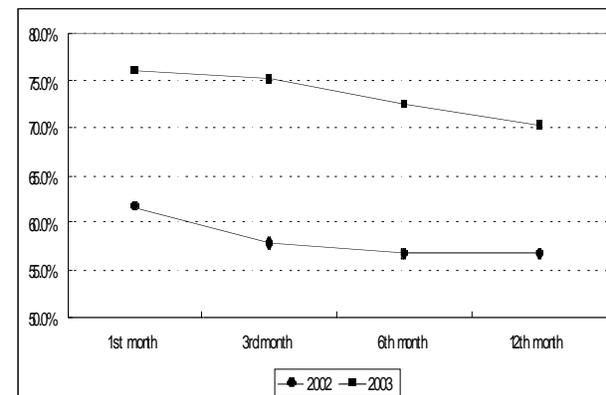
**Discussion**

ADRA made progress in the field of tobacco treatment by developing smoking cessation guideline and smoking cessation program for smokers. The success rate of this smoking cessation program in the present study was 65.0% 12 months after the program. The success of the program may be because it included “5A” approach of smoking cessation method which is more comfortable strategy for registered smokers who intended to quit, facilitation of medical doctors, and use of well developed program. The key elements of the counseling (Spangler et al., 2002) included in content such as consistent advise, set-up their quit date and follow-up with free supports. In addition, the workplace program was a good opportunity to promise to quit smoking in front of colleagues and to take their support for abstinence. In the capital city the quit rate was less than other cities. It can be explained by place of living, availability of tobacco access, and number of encouraging conditions. Thus, there is a need to conduct prolonged training and additional support activities during and after the follow-up period. In the Erdenet city, where the quit rate was higher than in the capital city, 72.9% of participants were adolescents and youth, who might be less addicted to smoking.

In this study, biochemical test for urine nicotine content of participants was not carried out, thus, there was limitations to determine whether participants are truly quit smoking or



**Figure 1. Cessation Rates in 2002 and 2003**



**Figure 2. Quit Rates in the Capital and Two Other Cities**

not. In addition, randomized controlled trial could be used to confirm an effectiveness of the training methods; however, due to financial shortage it was not conducted.

A number of effective smoking cessation programs are documented in the literature. For instance, in 1999-2000 Rooney et al. conducted a behavioral smoking cessation program among 117 adults. The quit rate of this study was 57%. Another survey revealed that success rate using nicotine reduction therapy and behavior modification for period of one year was 47% among heavy smokers, (Cooper and Clayton, 1989). A study conducted in 1996 by Taylor et al., showed that the intention to quit of smoking was one of important predictors for long term smoking cessation interventions. Relapse prevention is important to keep non smoking behavior. Since relapses are very frequent in quitting, the cessation rate at 2 month follow-up is usually higher than the rate at a longer follow-up (Fiore et al., 1994). Stead and Lancaster in 2002 revealed that group programs were more effective for helping people to stop smoking than being given self-help materials without face to face instruction and group support (Stead and Lancaster, 2002). Those studies showed that smokers less addicted were more likely to quit smoking which was also hypothesized in our study and described in previous paragraph of this section. Group counseling approach is relatively cheap, not requires expensive high technology, and equipments. Although, the provision of supportive policy and sustainable funding is essential for this kind of training for nicotine dependent smokers and keeping their abstinence. In this regard, the development of a policy to treat dependent smokers should be seen in the context of the development of national tobacco control policy as a main seeds of cancers, noncommunicable disease control and other tobacco caused diseases. These diseases have been constantly increasing in last decades in Mongolia and becoming heavy burden in health sector and health financing. If health care system offers such services for smokers, they will eventually release resources for other uses, no longer needed to treat lung cancer and other smoking caused diseases.

In many countries, tobacco dependent smokers are accepted as patients. In the United States (Fiore et al., 2000) and the United Kingdom (Raw et al., 2003), smoking cessation intervention and support have been integrated into primary health care practice. In Japan, since April 2006, 70% of cessation treatment costs have been covered by the medical insurance for nicotine addicted smokers who wish to quit smoking and seek treatment with a score (number of cigarettes per day multiply with years of smoking) more than 200. These experiences can be introduced in health care system of Mongolia. The Health Promotion Foundation was established by the Law on Tobacco control in 2005 in Mongolia. Every year 2% from the excise tax on tobacco will be allocated to this fund for health promotion and tobacco control activities including treatment for dependent smokers. It will be a good opportunity to continue implementation of the group counseling smoking cessation program for smokers. Studies show that delivering group

smoking cessation intervention for smokers willing to quit is one of important strategies to reduce smoking within the national comprehensive tobacco control policy and vital action for smokers. Especially, nonsmoking strategy can be more effective for the adolescent and youth before the starting smoking and in earliest stage of addiction to nicotine. Nicotine replacement therapy is relatively expensive for smokers, therefore, behavioral change training provided by health doctors will be more adequate in Mongolian conditions.

In conclusion, the group counseling on smoking cessation was effective for smokers who intended to quit smoking. Average quit rate of the participants was 65% at their last contact on 12 months. Group counseling approach of tobacco dependence treatment with one year follow-up may be effective when combined with "5A" approach, smokers' intention to quit smoking, and facilitation of the medical doctors.

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