A FOLLOW-UP STUDY OF FORMER S.A.R.D.A. CLIENTS

A report submitted to

The Research Advisory Group
The Society for the Aid and Rehabilitation
of Drug Abusers

by

Cheung Yuet-wah, Ph.D.
Principal Investigator

on behalf of

The Hong Kong Institute of Asia-Pacific Studies
The Chinese University of Hong Kong

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INTRODUCTION

In May 1995, The Society for the Aid and Rehabilitation of Drug Abusers submitted a research proposal to ACAN Research Subcommittee in response to the invitation of the Narcotics Division for applications for grants to conduct research in the drug area committed by the Government for the year 1995. The proposal was approved, and SARDA commissioned the Hong Kong Institute of Asia-Pacific Studies, The Chinese University of Hong Kong, to undertake the study, with Dr. Cheung Yuet-wah, Professor, Department of Sociology, C.U.H.K., as the Principal Investigator. An Advisory Group was formed under the chairmanship of Dr. James M.N. Ch'ien, Honorary Associate Professor, Department of Psychiatry, C.U.H.K., to oversee the research protocol and offer technical advice to the PI and his Research Assistant. The study was formally started in July 1995.

The objectives of the study were as follows:

1. To examine the drug use status of former clients of SARDA and describe their pathways to recovery/non-recovery;
2. To assess how useful drug use status at last case closure could be a predictor of post-service drug use status; and
3. To determine the demographic, social, psychological and treatment factors that are associated with post-service drug use.

METHODOLOGY

Research Design

The research design employed in this study was sample survey. Face-to-face structured interviews of former SARDA clients were conducted with a standardized questionnaire.

As SARDA began its service in as early as the 1960s, it is not practical to include all former clients in the target population of this study. We decided to specify a ten-year period, from January 1984 to December 1993, for the selection of subjects whose cases were closed (or last closed, if a subject had entered SARDA's programme more than once) during the said time frame. This ten-year period was chosen because we expected that the chance of successfully contacting former clients whose cases were last closed before 1984 would be very small. Cases closed in 1994 and 1995 were not included, as we wanted to make sure that the sampled subjects would have gone through a post-service period of at least one and a half years before the study began in July 1995, to allow natural events in life to influence their respective pathways and drug use status.

This ten-year period was divided into three Phases. Counting backwards from December 1993, subjects whose cases were last closed within the first three years of the post-service period were placed into Phase 1, those whose cases were last closed between the beginning of the fourth year and the end of the sixth year belonged to Phase 2, and those whose cases were last closed between the beginning of the seventh year and the end of the tenth year were put into Phases 3. Table 1 summaries the classification of Phases.

Table 1: The Three Phases of Post-service Period

| Phase | Last case closure | | No. of years in the Phase |
	From	To	
1	January 1, 1991	December 31, 1993	3
2	January 1, 1988	December 31, 1990	3
3	January 1, 1984	December 31, 1987	4

This study examined only male former clients, for two major reasons. Firstly, SARDA's Women's Treatment Centre has less than one-tenth as many clients as the Shek Kwu Chau Treatment and Rehabilitation Centre for male clients. As will be explained later, the sample size of the study would be small, and so reserving one-tenth of a small sample for female clients would, on one hand, yield too small a number of female subjects for analysis, and, on the other hand, undercut the already small number of male subjects. Secondly, the female programme and male programme are different in contents. Thus, it is not desirbale to mix them into one sample. Female former clients deserve a separate study.

Sampling

There were about 8,000 individual closed cases for males in the ten-year period mentioned above (i.e., between January 1,1984 and December 31, 1993), and the list of those former clients whose cases were last closed within this period constituted the sampling frame of the study.

Due to limited resources for conducting the study, the sample size was set at 200 subjects. The former clients in the sampling frame were stratified into the three Phases, and then 70 subjects would be drawn from Phase 1, 70 subjects from Phase 2, and 60 subjects from Phase 3. The simple random sampling method was used in selecting subjects from each of the Phases.

Since SARDA does not have regular contact with former clients after case closure, and since change of addresses was quite common among former clients, finding selected subjects to participate in the study was a very difficult task. After a batch of 200 names were selected, a letter was sent to each of them inviting them to participate. A large number of letters were returned, due to incorrect addresses. A relatively small number of former clients responded by telephone after receiving our letter, and except a few, most of them agreed to participate. The whole list of selected names was also checked against the (1) membership list of Pui Hong Self-help Association, (2) SARDA's current admission records, and (3) current admission records of Methadone Clinics. If names of selected subjects were found in either of these three sources, they would be contacted and invited to participate.

The very hard-to-reach nature of subjects of the present study necessitated the arrangements for replacement of selected former clients who could not be reached or who refused to participate. A second batch of 200 subjects stratified by the three Phases were randomly selected, and invitation letters were also sent to them. Their names were also checked against the membership list of Pui Hong and the current admission records of SARDA and Methadone Clinics. This tedious procedure, which had to be repeated five times, could have been much simplified if we were allowed to extract the addresses and telephone numbers of each potential subject from the CRDA (Central Registry of Drug Abuse) and confirm through the Registry of Birth and Death if any one was still alive.

Altogether six batches of former clients were drawn before the sample size of 200 subjects was reached. Details of the replacement exercises are shown in Table 2.

Table 2: Replacements*

Batch No.	No. of subjects selected	No reply	Letter returned	Known to be deceased	Refusal	No. of subjects interviewed
1	200	103	56	2	5	37
2	200	115	46	2	4	42
3	200	117	37	3	6	35
4	200	110	54	2	9	28
5	200	117	44	1	4	33
6	200	124	49	3	2	25
						N = 200

* Numbers in the columns of each batch do not necessarily add up to 200 because "No reply" might have included some subjects who were deceased but not known to SARDA, or interviewed while in treatment at SARDA or at Methadone clinics.

In the final sample of 200 subjects, the distribution of subjects in the Phases was 77 for Phase 1, 88 for Phase 2, and 35 for Phase 3. The number of Phase 3 subjects was substantially smaller than those of Phases 1 and 2. We had wished that the three Phases would have similar numbers of subjects, but the reality was that Phase three subjects, whose contact with SARDA had ceased some eight to twelve years ago, were extraordinarily difficult to reach. We had to be content with the relatively small number of subjects under Phase 3. Undoubtedly, a large number of SARDA's former clients have emigrated/ returned to China, or passed away, and the earlier their cases were closed, the more likely the contacts with them would have lost.

Because of the large number of replacements, the present sample could have a larger sampling bias than if there were not that many replacements. However, the bias tended to be against drug free subjects, because they usually have higher mobility or were better qualified to emigrate abroad. In fact, we were lucky to trace, through their relatives at the last known addresses, a few subjects who live in Shenzhen and commute to work in the New Territories daily. If we relied only on mail and telephone without vigorous effort of searching, they too would have to be replaced. Despite this bias, and since all the six batches of names were randomly selected, we believe that the present sample, the best that we could have arrived at given our limited resources, possessed a reasonable degree of

representiveness.

The Questionnaire

The questionnaire was divided into nine parts as follows:

(1) Personal information,
(2) Current drug use,
(3) Treatment history,
(4) Onset of first drug use,
(5) First treatment,
(6) Opinions on SARDA's services,
(7) Life in the Phases, including drug use, reasons for relapse (for drug using subjects), employment, social support, psychological well-being, and use of social services;
(8) Other comments/remarks, and
(9) Case information from SARDA's record

The questionnaire, in Chinese, was constructed by December 1995, and was then pre-tested with ten members of the Pui Hong Self-Help Association. The final, modified questionnaire was ready for use in February 1996.

Data Collection

Interviews began in February 1996 and were finished in August 1996. All interviews were conducted by the two Research Assistants of the project, except three, which were each conducted by both the Research Assistant and a Pui Hong Self-help Association member previously trained for the interview.

Venues of interviews included social service centres of SARDA, half-way houses of SARDA, counselling rooms in Shek Kwu Chau, the social centre of the Pui Hong Self-Help Association, and counselling rooms of Methadone Clinics.

RESULTS

Socio-Demographic Characteristics of the Sample

Table 3 gives information pertaining to several socio-demographic characteristics of the sample:

Table 3: Socio-demographic Characteristics of Sample

	n	%		n	%
Age: (Mean=43.3)			Whether Living with Others:		
25-29	7	3.5	Alone	55	27.5
30-39	72	36.0	With family	118	59.0
40-49	81	40.5	With friends	16	8.0
50-59	22	11.0	With girl friend	2	1.0
60 or over	18	9.0	With others	9	4.5
Housing Type:			Marital Status:		
Temp. housing/			Never married	95	47.5
squatter	6	3.0	Married, living with		
Rented bed	5	2.5	wife	41	20.5
Public housing			Married, not living		
in/before 1972	16	9.0	with wife	30	15.0
Public housing			Separated/divorced	26	13.0
after 1972	105	52.5	Widower	1	0.5
Rented private			Cohabitation	7	3.5
housing	26	13.0			
Home Ownership					
Scheme	8	4.0	Religion:		
Self-owned private					
housing	8	4.0	Nil	159	79.5
Rented room	15	7.5	Buddhism	15	7.5
Workplace	5	2.5	Christianity	20	10.0
On street/shelter			Catholicism	5	2.5
other	6	3.0	Other	1	0.5
Education:			Monthly Income: (Mean=$4,800)		
No formal			$0-2,400	71	35.5
schooling	10	5.0	$2,401-9,000	83	41.5
P.4 or under	35	17.5	Over $9,000	46	23.0
P.5-P.6	77	28.5			
F.1-F.3	65	32.5			
F.4-F.5	11	5.5	Whether Have Children:		
Matriculated	1	0.5			
Vocational/tech-			Nil	119	59.5
nical college	1	0.5	Yes	81	40.5
Employment:					
Nil	85	42.5			
Self-employed	4	2.0			
Part-time/seasonal	46	23.0			
Full-time	65	32.5			

The sample had a mean age and a median age of 43.3 and 43.0, respectively, with an age range from 25 to 71. Among the 200 subjects, 61.5% were living in public housing, 27.5% were living alone, 47.5% were not married, 79.5% had no religion, 61.0% had only primary six or lower levels of educaion, 42.5% were not employed, and 35.5% were either not having any income or were receiving a monthly income of $2,400 or less.

The mean age for Phase 1 was 40.9 (range: 25-67), for Phase 2 was 44.4 (range: 27-71), and for Phase 3 was 45.7 (range: 28-66).

Treatment Characteristics of the Sample

The mean number of previous treatments (regardless of modalities) the subjects had received was 8.7, with range from 2 to 28. The mean number of previous SARDA treatments was 5.1, with range from 1 to 19.

Information pertaining to whether or not the subjects had completed SARDA's programme is given in Table 4.

Table 4: Completion of SARDA's Programme

	N	%
Had never finished detox/recuperation	70	35.0
Had ever finished detox/recuperation only	62	31.0
Had ever finished detox/recuperation and half-way house only	21	10.5
Had ever finished detox/recuperation, stayed in half-way house, and received follow-up counselling/social reintegration service (i.e., Finished whole programme)	47	23.5
Total	200	100.0

As indicated in Table 4, among the 200 subjects, 70 subjects (35.0%) had never completed the initial detoxification and recuperation stage of residential treatment and left prematurely against medical advice, 62 subjects (31.0%) had ever finished only the "Shek Kwu Chau" part of the programme, 21 subjects (10.5%) had ever finished the "Shek Kwu Chau" and "half-way house" parts of the programme, and 47 subjects (23.5%) had ever gone through these two parts plus the "follow-up counselling and social re-integration" part of the programme (i.e., the whole programme). Although aftercare service was equally available to all, most premature dischargees from SKC avoided contact until they felt the need to apply for re-admission.

What was the percentage of subjects who became drug free at the time of last case closure? Table 5 gives the results.

Table 5: Percentage of Drug Free Subjects at Last Case Closure

Total no. of subjects	No. of subjects who had ever gone through whole programme	No. of drug free subjects		Percentage of drug free subjects	
		among all subjects	among only those who had ever gone through whole programme	among all subjects	among only those who had ever gone through whole programme
(N)	(W)	(F1)	(F2)	(F1) ÷ (N)	(F2) ÷ (W)
200	47	36	27	18.0%	54.7%

From Table 5, it can be seen that at the time of last case closure, 36 out of the 200 subjects (18.0%) were drug free and 164 subjects (82.0%) were not. At first glance, this seems to be a rather low drug free rate, but if only those who had ever gone through the whole SARDA programme were taken into consideration, the percentage of drug free subjects at last case closure was not low at all. Among the 47 subjects who had ever gone through the whole programme, 27 (54.7%) were able to achieve drug free status at last case closure. (It should be noted that those who did not finish the whole programme or whose drug use status at case closure were unknown were conservatively recorded as *non-drug free* at case closure.)

Drug Use Status in Each Phase

How did our subjects fare in each of the Phases after receiving SARDA's service? What percentage of them could remain drug free and what percentage could not? Table 6 gives the results.

In Phase 1 (N=200, i.e., subjects in all three Phases combined), 13.5% (27 subjects) were able to be drug free during the whole period. If only those who had ever gone through the whole programme (47 subjects) are taken into consideration, 42.6% (20 subjects) were able to be drug free in this Phase. However, among those subjects who had never finished the whole programme (153 subjects), only 4.6% (7 subjects) were able to be drug free (not shown in Table 5). The difference in the percentage of drug free subjects between those who had ever finished the whole programme and those who had not was statistically significant (p<.001).

In Phase 2 (N=123, i.e., Phases 2 & 3 subjects combined), 19.5% (24 subjects) were able to be drug free during the whole period. If only those who had ever gone through the whole programme (25 subjects) are taken into consideration, 48.0% (12 subjects) were able to be drug free in this Phase. However, among those subjects who had never finished the whole programme (98 subjects), only 12.2% (12 subjects) were able to be drug free (not shown in Table 5). The difference in the percentage of drug free subjects between those who had ever finished the whole programme and those who had not was statistically

significant (p<.001).

Table 6: Percentage of Drug Free Subjects in the Phases

Phase	Total no. of subjects	No. of subjects who had ever gone through whole programme	No. of drug free subjects		Percentage of drug free subjects	
			among all subjects	among only those who had ever gone through whole programme	among all subjects	among only those who had ever gone through whole programme
	(N)	(W)	(F1)	(F2)	(F1) ÷ (N)	(F2) ÷ (W)
1	200	47	27	20	13.5%	42.6%
2	123	25	24	12	19.5%	48.0%
3	35	7	9	4	25.7%	57.1%

In Phase 3 (N=35, i.e., only Phase 3 subjects), 25.7% (9 subjects) were able to be drug free during the whole period. If only those who had ever gone through the whole programme (7 subjects) are taken into consideration, 57.1% (4 subjects) were able to be drug free in this Phase. However, among those subjects who had never finished the whole programme (28 subjects), only 17.9% (5 subjects) were able to be drug free (not shown in Table 6). The difference in the percentage of drug free subjects between those who had ever finished the whole programme and those who had not was statistically significant (p<.001).

Recovery/Non-recovery Paths

How likely were subjects who were drug free in Phase 1 able to remain drug free in Phases 2 and 3? In Table 7, we trace the recovery or non-recovery paths of the subjects with respect to their drug use status in Phases 1 and 2.

Table 7: From Phase 1 to Phase 2 (N=123)

	Phase 1 drug free	Phase 1 non-drug free	
Phase 2 drug free	11 (8.9%)	13 (10.6%)	24 (19.5%)
Phase 2 non-drug free	3 (2.4%)	96 (78.0%)	99 (80.5%)
	14 (11.4%)	109 (88.6%)	N=123 (100.0%)

Among the 123 subjects who had both Phase 1 and Phase 2 experiences, 11 subjects (8.9%) were able to be drug free in both Phases, 96 (78.0%) were non-drug free in both Phases, 13 (10.6%) were not drug free in Phase 1 but became drug free in Phase 2, and 3 (2.4%) were drug free in Phase 1 but had relapsed in Phase 2.

Table 8 gives information pertaining to the maintenance or change of drug use status in all three Phases.

Table 8: From Phase 1 to Phase 2 to Phase 3 (N=35)

Phase 1	Phase 2	Phase 3	Total
Drug free	Drug free	Drug free	4 (11.4%)
Non-drug free	Non-drug free	Drug free	3 (8.6%)
Non-drug free	Drug free	Drug free	1 (2.9%)
Drug free	Non-drug free	Drug free	1 (2.9%)
Drug free	Drug free	Non-drug free	1 (2.9%)
Drug free	Non-drug free	Non-drug free	1 (2.9%)
Non-drug free	Non-drug free	Non-drug free	24 (68.6%)

Among Phase 3 subjects (N=35), 4 subjects (11.4%) were able to maintain drug free status all through the three Phases. Another 5 (14.3%) eventually became drug free in Phase 3 although they had relapsed in earlier Phases. The number of subjects who were non-drug free in all three Phases was 24 (68.6%), and 2 subjects (5.7%) had relapsed in Phase 3 after being drug free in earlier Phases.

Factors Affecting Drug use in Phase 1

A large number of independent variables have been included in the study so as to find out if they are associated with post-SARDA service drug use of the subjects. These variables can be classified into six types, namely, social functioning variables, social support variables, psychological well-being variables, drug subculture variables, public service utilization variables, and the variable of drug use at last case closure. Results pertaining to the relationships between these sets of variables and drug use in Phase 1 are shown in Table 9.

Table 9: Percentage of Drug Free Subjects by Independent Variables: Phase 1

	% (n)		% (n)
SOCIAL FUNCTIONING VAIABLES:		**DRUG SUBCULTURE VARIABLES:**	
Employment	(p<.001)	*Whether Seeing Drug-using Friends*	(p<.001)
FT licit employment/Self-employed in licit business	22.1 (25)	Often/Sometimes	0.5 (7)
Unempl./PT licit empl./		No/No such friends	50.0 (20)

	% (n)		% (n)
FT or PT illicit empl./Other	2.4 (2)	*Whether Using Illicit Drugs Other Than Heroin*	(p<.01)
Membership in Social Clubs/ Selp-Help Organizations	(p<.001)	Yes	3.3 (2)
Yes	51.5 (17)	No	18.0 (25)
Nil	6.0 (10)		
		Whether Involved in Sale of Illicit Drugs	(p<.05)
Involvement in Volunteer Work	(p<.01)	Yes	0.0 (0)
Often/Sometimes	37.5 (6)	No	15.3 (27)
Seldom/Never	11.4 (21)		
		Whether a Triad Society Member	(p>.05)
		Yes, active	0.0 (0)
SOCIAL SUPPORT VARIABLES:		Yes, but inactive	8.9 (5)
		No/Not anymore	16.5 (22)
Acceptance by Family	(p<.001)		
Highly accepted	43.2 (16)		
Accepted	8.9 (9)	**PUBLIC SERVICE UTILIZATION VARIABLES:**	
Not accepted	0.0 (0)		
		Social Welfare Service	(p<.001)
Acceptance by Non-addict Friends	(p<.01)	Yes	2.4 (2)
Highly accepted	42.9 (6)	No	21.4 (25)
Accepted	9.6 (9)		
Not accepted	8.7 (21)	*Job Referral Service*	(p<.001)
		Yes	1.5 (1)
Acceptance by Recovered Friends	(p<.01)	No	19.5 (26)
Highly accepted	35.5 (11)		
Accepted	17.6 (12)	*Housing Service*	(p>.05)
Not accepted	0.0 (0)	Yes	25.0 (2)
		No	13.0 (25)
Support from Neighbours	(p<.01)		
Highly supportive/supportive	33.3 (3)	*Medical/Dental Service*	(p<.01)
Not supportive	4.8 (4)	Yes	6.1 (5)
		No	18.6 (22)
PSYCHOLOICAL WELL-BEING VARIABLES:			
		DRUG USE AT LAST CASE CLOSURE:	
Whether Life is Normal	(p<.001)		
Very normal/Normal	23.8 (24)		(p<.001)
Very abnormal/Not normal	3.0 (3)	Drug free	58.3 (21)
		Non-drug free	3.7 (6)
Whether Thinking Addicts are Discriminated by People in Society	(p<.001)		
A lot of/Some discrimination	7.1 (11)		
Little/No discrimination	34.8 (16)		
Whether Able to Control Life	(p<.001)		
Totally/Mostly in control	23.7 (22)		
Totally/Mostly not in control/NA	4.9 (5)		
Satisfaction with Life	(p<.001)		
Very satisfied/Satisfied	28.6 (22)		
Very dissatisfied/Dissatisfied/NA	4.1 (5)		

Satisfaction with Sexual Life	(p<.001)
Very satisfied/Satisfied	32.6 (14)
Very dissatisfied/Dissatisfied/NA	9.2 (13)

Levels of significance were based on Chi-Square tests.

Drug use in Phase 1 was significantly associated with social functioning variables. Subjects who had a full-time licit employment or were self-employed in licit business, those who were involved in social recreational/interest groups, notably through the Pui Hong Self-help Association, and those who did volunteer work, were more likely to be drug free.

Social support variables were also significantly associated with drug use in Phase 1. The more the subject was accepted by his family, non-addict friends, recovered friends (especially Pui Hong members) and neighbours, the more likely the subject was able to be drug free.

Drug free subjects had better psychological well-being than non-drug free subjects. The former were more likely to feel that they could control their own lives, to perceive less discrimination from the public, and to report satisfaction with life as a whole and with sexual life.

Social welfare, job referral and medical/dental services offered by the Government and NGOs were more frequently utilized by non-drug free subjects than drug free subjects in Phase 1. Obviously people who were still unable to quit drug use had greater needs for such government services.

Three of the four drug subculture variables were significantly related to drug use in Phase 1. Subjects who were still seeing drug using friends, and those who were involved in the sale of illicit drugs, were much more likely to be non-drug free.

Drug use status at last closure was significantly associated with drug use status in Phase 1. Subjects who were able to be drug free at last case closure were much more likely than those who were not to stay drug free in this Phase.

Factors Affecting Drug Use in Phase 2

Results pertaining to the relationships between the six sets of independent variables and drug use in Phase 2 are presented in Table 10.

Table 10: Percentage of Drug Free Subjects by Independent Variables: Phase 2

	% (n)		% (n)
SOCIAL FUNCTIONING VAIABLES:		**DRUG SUBCULTURE VARIABLES:**	
Employment	(p<.05)	*Whether Seeing Drug-using Friends*	(p<.001)
FT licit employment or		Often/Sometimes	8.3 (8)
self-employed in licit business	27.6 (16)	No/No such friends	59.3 (16)
Unempl./PT licit empl./			
FT or PT illicit empl./Other	12.3 (8)	*Whether Using Illicit Drugs*	
		Other Than Heroin	(p>.05)
Membership in Social Clubs/	(p<.001)	Yes	9.1 (2)
Selp-Help Organizations		No	21.8 (22)
Yes	57.9 (11)		
Nil	12.5 (13)	*Whether Involved in Sale of*	
		Illicit Drugs	(p>.05)
Involvement in Volunteer Work	(p<.01)	Yes	7.7 (1)
Often/Sometimes	66.7 (4)	No	20.9 (23)
Seldom/Never	17.1 (20)		
		Whether a Triad Society Member	(p>.05)
		Yes, active	0.0 (0)
SOCIAL SUPPORT VARIABLES:		Yes, but inactive	14.7 (5)
		No/Not anymore	21.6 (19)
Acceptance by Family	(p<.05)		
Highly accepted/Accepted	24.1 (20)		
Not accepted	6.7 (2)	**PUBLIC SERVICE UTILIZATION**	
		VARIABLES:	
Acceptance by Non-addict Friends	(p<.05)		
Highly accepted/Accepted	26.9 (18)	*Social Welfare Service*	(p<.01)
Not accepted	0.0 (0)	Yes	9.8 (6)
		No	29.0 (18)
Acceptance by Recovered Friends	(p<.05)		
Highly accepted/Accepted	30.4 (17)	*Job Referral Service*	(p<.01)
Not accepted	6.3 (1)	Yes	5.4 (2)
		No	25.6 (22)
Support from Neighbours	(p>.05)		
Highly supportive/supportive	30.8 (4)	*Housing Service*	(p<.05)
Not supportive	22.0 (11)	Yes	44.4 (4)
		No	17.5 (20)
PSYCHOLOICAL WELL-BEING VARIABLES:		*Medical/Dental Service*	(p>.05)
		Yes	14.3 (8)
Whether Life is Normal	(p<.001)	No	23.9 (16)
Very normal/Normal	30.7 (23)		
Very abnormal/Not normal	2.1 (1)		
		DRUG USE AT LAST CASE CLOSURE:	
Whether Thinking Addicts are			
Discriminated by People in Society	(p<.001)		(p<.001)
A lot of/Some discrimination	9.7 (9)	Drug free	55.0 (11)
Little/No discrimination	50.0 (15)	Non-drug free	12.6 (13)

Whether Able to Control Life	(p<.001)
Totally/Mostly in control	37.7 (23)
Totally/Mostly not in control/NA	1.6 (1)
Satisfaction with Life	(p<.001)
Very satisfied/Satisfied	40.0 (20)
Very dissatisfied/Dissatisfied/NA	5.5 (4)
Satisfaction with Sexual Life	(p<.001)
Very satisfied/Satisfied	48.1 (13)
Very dissatisfied/Dissatisfied/NA	11.5 (11)

Levels of significance were based on Chi-Square tests.

As in Phase 1, social functioning variables were significantly associated with drug use in Phase 2. Subjects who had a full-time licit employment or were self-employed in licit business, those who were involved in social recreational/interest groups, and those who did volunteer work, were more likely to be drug free.

Social support variables, with the exception of neighbours' support, were also significantly associated with drug use in Phase 2. The greater the acceptance by family, non-addict friends and recovered friends, the more likely the subject was able to be drug free.

As in Phase 1, psychological well-being variables were significantly related to drug use in Phase 2. Drug free subjects were more likely to feel that they could control their own lives, to perceive less discrimination from the public, and to report satisfaction with life as a whole and with sexual life.

Whether seeing drug-using friends was the only drug subculture variable that was significantly related to drug use in Phase 2. Subjects who were still seeing drug-using friends were much less likely to be drug free.

Social welfare and job referral services provided by the Government and NGOs were more frequently utilized by non-drug free subjects than drug free subjects in Phase 2. People who were still unable to quit drug use had greater needs for such services.

Drug use status at last closure was also significantly associated with drug use status in Phase 2. Subjects who were able to be drug free at last case closure were much more likely than those who were not to stay drug free in this Phase.

Factors Affecting Drug Use in Phase 3

Results pertaining to the relationships between the six sets of independent variables and drug use in Phase 3 are shown in Table 11.

Table 11: Percentage of Drug Free Subjects by Independent Variables:
Phase 3

	% (n)		% (n)
SOCIAL FUNCTIONING VAIABLES:		DRUG SUBCULTURE VARIABLES:	
Employment (p<.05)		Whether Seeing Drug-using Friends (p<.01)	
FT licit employment or		Often/Sometimes	17.4 (4)
self-employed in licit business	41.2 (7)	No/No such friends	62.5 (5)
Unempl./PT licit empl./			
FT or PT illicit empl./Other	14.3 (2)	Whether Using Illicit Drugs	
		Other Than Heroin (p>.05)	
		Yes	0.0 (0)
Membership in Social Clubs/ (p<.01)		No	26.5 (9)
Self-Help Organizations			
Yes	66.7 (4)	Whether Involved in Sale of	
Nil	17.2 (5)	Illicit Drugs (p>.05)	
		Yes	0.0 (0)
Involvement in Volunteer Work (p not computed)		No	26.5 (9)
Often/Sometimes	-- (0)		
Seldom/Never	-- (35)	Whether a Triad Society Member (p>.05)	
		Yes, active	0.0 (0)
		Yes, but inactive	14.3 (1)
SOCIAL SUPPORT VARIABLES:		No/Not anymore	29.6 (8)
Acceptance by Family (p>.05)		PUBLIC SERVICE UTILIZATION	
Highly accepted/Accepted	32.0 (8)	VARIABLES:	
Not accepted	10.0 (1)		
Acceptance by Non-addict Friends (p>.05)		Social Welfare Service (p<.05)	
Highly accepted/Accepted	43.8 (7)	Yes	7.1 (1)
Not accepted	18.2 (2)	No	38.1 (8)
Acceptance by Recovered Friends (p>.05)		Job Referral Service (p>.05)	
Highly accepted/Accepted	46.2 (6)	Yes	9.1 (1)
Not accepted	22.2 (2)	No	33.3 (8)
Support from Neighbours (p>.05)		Housing Service (p>.05)	
Highly supportive/supportive	40.0 (2)	Yes	33.3 (1)
Not supportive	31.3 (5)	No	25.0 (8)
PSYCHOLOICAL WELL-BEING VARIABLES:		Medical/Dental Service (p>.05)	
		Yes	25.0 (3)
Whether Life is Normal (p>.05)		No	26.1 (6)
Very normal/Normal	31.8 (7)		
Very abnormal/Not normal	15.4 (2)		
		DRUG USE AT LAST CASE CLOSURE:	
Whether Thinking Addicts are			
Discriminated by People in Society (p<.05)			(p>.05)
A lot of/Some discrimination	11.1 (2)	Drug free	21.4 (6)
Little/No discrimination	41.2 (7)	Non-drug free	42.9 (3)

Whether Able to Control Life	*(p>.05)*
Totally/Mostly in control	33.3 (6)
Totally/Mostly not in control	17.6 (3)
Satisfaction with Life	*(p<.05)*
Very satisfied/Satisfied	41.2 (7)
Very dissatisfied/Dissatisfied	11.1 (2)
Satisfaction with Sexual Life	*(p>.05)*
Very satisfied/Satisfied	32.0 (8)
Very dissatisfied/Dissatisfied	10.0 (1)

Levels of significance were based on Chi-Square tests.

While most of the predictor variables significantly related to drug use in Phase 1 continued to be significant in Phase 2, a number of them became non-significant in Phase 3. Despite statistical non-significance, their pattern of relationships with drug use was similar to those in the earlier Phases.

Employment and involvement with social recreational/interest groups were still significantly related to drug use in Phase 3.

All social support variables showed similar relationships with drug use as in the earlier Phases, but none of the associations of these relationships was statistically significant.

Among psychological well-being variables, perception of discrimination and life satisfaction remained significant.

Seeing drug using friends was still significantly associated with drug use in Phase 3.

The difference in use of social welfare service between drug free subjects and non-drug free subjects continued to be significant in Phase 3 as in the earlier Phases.

In this Phase, drug use at last case closure was not as good a predictor of drug use status as it was in Phases 1 and 2, which may reflect the gradual dilution of treatment effects over time.

Caution should be made in interpreting the relationships between the predictor variables and drug use in Phase 3, because the small number of subjects in this Phase (35) had produced unsatisfactory breakdowns for some variables and had made it difficult for relationships between variables to become statistically significant.

Employment among Drug Free Subjects in the Phases

The above results show that a full-time licit employment or seld-employed in licit a business was a very important "protective factor" against drug use, especially in the first two Phases. What was the employment situation among subjects in the three Phases? What

percentage of drug free subjects had obtained a full-time licit employment or become self-employed in a licit business in the Phases? Table 12 gives the results.

Table 12: Employment by Phases

Employment Type	Phase 1				Phase 2				Phase 3			
	Among all subjects		Among drug free subjects		Among all subjects		Among drug free subjects		Among all subjects		Among drug free subjects	
	n	%	n	%	n	%	n	%	n	%	n	%
Licit: Full-time or self-employed	113	56.5	25	92.6	58	47.2	16	66.7	17	48.6	7	77.8
Licit: Part-time	30	15.0	0	0.0	24	19.5	3	12.5	6	17.1	1	11.1
Illicit: FT, PT or SE	20	10.0	0	0.0	9	7.3	1	4.2	2	5.7	0	0.0
Unemployed	31	15.5	0	0.0	25	20.3	1	4.2	6	17.1	1	11.1
Other (Study, imprisonment, etc.)	6	3.0	2	7.4	7	5.7	3	12.5	4	11.4	0	0.0
N	200		27		123		24		35		9	

From Table 12, it can be seen that the percentage of subjects who obtained full-time employment in licit occupations or were self-employed in licit business decreased from 56.5% in Phase 1 to 47.2% in Phase 2 and 48.6% in Phase 3.

The percentage of subjects obtaining full-time licit jobs or being self-employed in licit business was higher among drug free subjects than among all subjects in each Phase. However, this percentage decreased from 99.2% in Phase 1 to 66.7% in Phase 2 and 77.8% in Phase 3.

Pui Hong Self-help Association Members among Drug Free Subjects

Membership in social clubs/self-help organizations was also a strong protective factor against drug use in all the Phases. What was the percentage of drug free subjects who were members of the Pui Hong Self-help Association in the Phases? This information is given in Table 13.

Table 13: Pui Hong Members among Drug Free Subjects

Drug Free Subjects	No social group membership		With social group membership				N
			Pui Hong		Other		
	n	%	n	%	n	%	
Phase 1	10	37.0	17	63.0	0	0.0	27
Phase 2	13	54.2	9	37.5	2	8.3	24
Phase 3	5	55.6	3	33.3	1	11.1	9

In Phase 1, the percentage of active Pui Hong membership among drug free subjects was 63.0% (17 out of 27 drug free subjects). This percentage decreased to 37.5% (9 out of 24 drug free subjects) in Phase 2, and to 33.3% (3 out of 9) in Phase 3.

This finding suggests that membership in Pui Hong played the most important role in Phase 1 (the first three years following SARDA's social rehabilitation services). It seems natural for the former clients to develop social affiliations on their own other than the formal self-help network as they secure full re-integration into the community at large.

Drug Use and Criminality

It is commonly held that there is a strong link between drug use and criminality, as the addict would turn to illegal means to obtain money to support his/her drug use after exhausting legal sources of money supply. What percentage of non-drug free subjects supported their drug habit with money totally or partly obtained from illegal means? Table 14 gives the findings.

Table 14: Obtaining Money from Illegal Means
(Non-drug Free Subjects)

	Total no. of non-drug free subjects	Subjects who supported drug use by obtaining money from illegal means	
		n	%
1st episode of addiction	200	51	25.5
Phase 1	173	40	23.1
Phase 2	99	18	18.2
Phase 3	26	4	15.4

During the first episode of the subjects' addiction to heroin, 25.5% of them financed their drug habit with money totally or partly obtained from illegal means. In Phase 1, 23.1% of drug using subjects maintained their habit by using money totally or partly obtained from illegal means. This percentage decreased to 18.2% and 15.4% in Phase 2 and Phase 3, respectively.

The need of some subjects to use illegal means to obtain money to support drug use had

resulted in some of them being arrested by the police for both drug-related and non-drug-related offences. Table 15 gives the results pertaining to arrests.

In Phase 1, 43.8% and 23.1% of the drug using subjects had been arrested for drug-related offences and non-drug-related offences, respectively. In Phase 2 and Phase 3, arrest figures for both types of offences decreased steadily. The proportion of drug using subjects arrested for drug-related offences was 34.8% in Phase 2 and 24.0% in Phase 3. That for non-drug-related offences was 10.4% in Phase 2 and 4.0% in Phase 3. Despite their non-drug free status, the declining trend of arrests in the three successive Phases indicates a positive outcome among former clients.

Table 15: Arrested for Drug-related Crimes and Non-Drug-related Crimes
(Non-drug Free Subjects)

Arrested for	Phase 1		Phase 2		Phase 3	
	n	%	n	%	n	%
Drug-Related Crime:						
Yes	74	43.8	32	34.8	6	24.0
No	95	56.2	60	65.2	19	76.0
N	169	100.0	92	100.0	25	100.0
Non-Drug-Related Crime:						
Yes	39	23.1	10	10.4	1	4.0
No	130	76.9	86	89.6	24	96.0
N	169	100.0	96	100.0	25	100.0

Subjects in Methadone Treatment Programme

Lastly, we take a look at those subjects who were in the Methadone Treatment Programme (MTP) at the time of interview. What percentage of them could maintain illicit drug free? Results pertaining to these subjects are shown in Table 16.

Table 16: Illicit Drug Use among Subjects in Methadone Treatment Programme

Phase	No. of subjects in Phase	No. of subjects currently on Methadone Programme	% among all subjects in Phase	Illicit drug free in 30 days prior to interview	
				n	%
1	200	35	17.5	5	14.3
2	123	40	32.5	10	25.0
3	35	17	48.6	5	29.4
N	200	92	46.0	20	21.7

Altogether 92 subjects (46% of all subjects) were currently on the MTP. Their distribution in the three Phases was 35 subjects in Phase 1, 40 subjects in Phase 2, and 17 subjects in Phase 3. Among these 92 subjects, 21.7% (20 subjects) were able to be currently free from illicit drugs (not using any illicit drugs in the past 30 days). Their distribution was 5 subjects in Phase 1, 10 subjects in Phase 2, and 5 subjects in Phase 3. With respect to all the subjects in the MTP subjects, the percentage of illicit-drug-free subjects increased from 14.3% in Phase 1, to 25.0% in Phase 2 and 29.4% in Phase 3. This rising trend corresponds with that of completely drug free subjects shown in Table 6.

DISCUSSION AND RECOMMENDATIONS

As high attrition rates among clients in voluntary treatment programmes is a universal phenomenon, it is not surprising that only 23.5% of the 200 subjects (i.e., 47 graduates) had ever finished the whole rehabilitation/aftercare programme of SARDA. In assessing the voluntary abstinence or drug free rate in any follow-up study, it would not be completely accurate to compare the outcome of both the drop-outs, who had not benefitted from the full range of services offered by the programme, and the graduates, who had ever completed the prescribed programme. Looking at the percentage of graduates who could maintain their drug free status in each of the 3 Phases, the abstinence rate was quite impressive. This percentage was 42.6% in Phase 1, 48.0% in Phase 2, and 57.1% in Phase 3, indicating a rising trend with time.

If subjects who had never finished the whole programme were also included, the percentages of drug free subjects in the three Phases became substantially lower (13.5% in Phase 1, 19.5% in Phase 2, and 25.7% in Phase 3). However, the likelihood of becoming drug free still increased with time. This certainly reflects the importance of equal attention and aftercare to both the graduates and drop-outs from treatment and rehabilitation programmes. It is indeed very rare for any addict to achieve stable abstinence following one-time treatment. Nevertheless, we agree that a re-admitted applicant should be counselled to understand the risk factors which led to his relapse and taught how to deal with the risky situations.

Since drug use at last case closure was a powerful predictor of post-service drug use status, especially for Phases 1 and 2, more innovative efforts should be made in relapse prevention, and more resources should be allocated, to the existing psycho-social rehabilitation programmes, so that the abstinence rate or drug free rate of clients could be further improved. As the present findings confirmed the importance of aftercare, including the transitional half-way house residence between SKC and the community at large, clients should be motivated to stay and finish the whole programme.

Social functioning variables, social support variables (including mutual support through PHSHA), psychological well-being variables, formal support services from the Government and NGOs (such as job referral, social welfare, housing and medical/dental services), and drug subculture variables were found to be significantly affecting drug use in the three Phases, especially the first two Phases.

These findings confirm that full-time licit employment/self-employment in licit

business, involvement in social recreational/self-help groups, social support from family, friends (non-addict friends and recovered friends) and neighbours, psychological well-being, formal support services from the Government and NGOs, and detaching from the drug subculture are very important protective factors against relapse after leaving SARDA's residential programme. Relapse prevention and/or reduction in drug re-using periods would be more effectively achieved if SARDA's treatment and rehabilitation services are followed by strengthened supportive networking with the government agencies and leading NGOs concerned, as well as with the family, friends, the neighbourhood and the local community.

Concerning involvement in social recreational/self-help groups, Pui Hong membership has been shown to be the most common protective factor among drug free subjects, despite declining membership in successive Phases. Pui Hong has also played an important role in facilitating voluntary service by former clients to contribute to the reduction of illicit demand on drugs and of risk behaviours related to HIV/AIDS infection, thus indirectly raising the self-esteem and psychological well-being of our clients.

The findings also confirmed that drug addiction and re-addiction would result in the use of illegal means to support the habit. Some 15.4 to 23.1% of the subjects reported that they used money totally or partly obtained from illegal means to support their drug use, and their chance of being arrested for drug-related offences was as high as 43.8% in Phase 1. This suggests that social education on crime prevention should be strengthened during SARDA's social rehabilitation and aftercare period.

Findings pertaining to participation in the Methadone Treatment Programme showed that almost half (46.0%) of the subjects were currently on the Programme, and among these subjects, 21.7% were able to achieve illicit drug free status (i.e., voluntary abstinence from heroin in the past 30 days). This is evidence that MTP has been playing an important role in helping SARDA's former clients in their pathway to normal social functioning and possibly even to recovery from relapses. This also shows that the linking of the Methadone Treatment Programme with SARDA's social rehabilitation and aftercare services was a correct policy decision. We understand that through the structured counselling provided by SARDA's social workers at various Methadone Clinics, more ambulatory patients have opted for residential treatment and rehabilitation to achieve total abstinence from both heroin and methadone. This collaboration between government agency (i.e., Department of Health) and NGO (i.e., SARDA) is certainly a pioneering movement, and may be a topic of further study to evaluate the outcome of the said collaborative intervention.

In conclusion, we must point out the limitation of any retrospective follow-up study in ascertaining causal relationships between risk/protective factors and drug use status. It is very likely that the associations between social functioning variables, social supporting variables, psychological well-being variables, drug subculture variables, and public service utilization variables and drug use status are indicating reciprocal relationships rather than relationships in a one-way direction.

In this report, only bivariate analyses were performed to assess the significance of the relationship between each pair of variables. Data of this study deserve further analysis using methods of multivariate analysis that can test the spuriousness of relationships and compare the relative importance of individual independent variables in explaining the

variances of dependent variables.

[End of report]

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