

A Study on the Motivational Strategy for Engaging Early Drug Abusers

Commissioned by Action Committee Against Narcotics (ACAN)

Dr. Cheung Kin Leung Ben (Chief investigator)
Dr. Tang Jinling
Dr. Cynthia Chan
Ms. Chang Suk Yi Sonia
Mr. Hui Wai Chi Simon
Dr. Cheng Wai Fun Anna
Dr. Lee Lai Ping
Dr. Paul Tam M.S.
Dr. Anna Lam Kit Sum
Dr. Fung Robert Jr.
Ms. Lai Wing-Ngar
Ms. Wong Siu Shue
Mr. Ho Kwok-hung

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Hong Kong Jockey Club Drug InfoCentre

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RESEARCH TITLE:

Randomized control trial of free body check-up and personalized motivational feedback as an early intervention for substance users.

INVESTIGATORS:

Dr. Cheung Kin Leung Ben, Senior Medical Officer and in-charge of Substance Abuse Assessment Clinic, Kwai Chung Hospital (**Chief investigator**)

Dr. Tang Jinling, Associate Professor in Epidemiology & Community Medicine, Dept of Community and Family Medicine, Chinese University of Hong Kong.

Dr. Cynthia Chan, Associate Professor in Family Medicine, Dept of Community and Family Medicine, Chinese University of Hong Kong.

Ms. Chang Suk Yi Sonia, Clinical Psychologist, Kwai Chung Hospital.

Mr. Hui Wai Chi Simon, Senior Physiotherapist, Kwai Chung Hospital.

Dr. Cheng Wai Fun Anna, Medical Officer, Dept. of Paediatrics, Princess Margaret Hospital.

Dr. Lee Lai Ping, Dept. of Paediatrics, Princess Margaret Hospital.

Dr. Paul Tam M.S., Chief of Service, Team 4, Kwai Chung Hospital.

Dr. Anna Lam Kit Sum, Medical Officer, Kwai Chung Hospital.

Dr. Fung Robert Jr. Medical Officer, Kwai Chung Hospital.

Ms. Lai Wing-Ngar, Research Assistant, Kwai Chung Hospital.

Ms. Wong Siu Shue, Physiotherapist, Prince of Wales Hospital.

Mr. Ho Kwok-hung, Nursing Officer(Psy), Kwai Chung Hospital.

INTRODUCTION:

There is a worrying trend of increase in the number of young drug abusers in Hong Kong. A total of 3,049 drug abusers under the age of 21 were reported in the first nine months of 2000, as compared to 2,018 in the same period of 1999. Significant increase was observed in the use of psychoactive substances. For instance, reported abusers of MDMA ("ecstasy") rose from 179 in the first nine months of 1999 to 1,664 in the same period of 2000, while abusers of ketamine rose from 9 to 926, and cocaine from 10 to 25 [1]. Due to their effects on neurotransmissions, psychoactive substance abuse may cause mental complications including psychosis and depression. More and more drug-related suicides and aggressions are being reported in the mass media. In psychiatric practice, it is recognized that the early-identified cases usually recover with better prognosis, while the late ones may be left with more severe and perhaps life-long neuro-psychiatric morbidity. The problem is that many early psychoactive drug users do not see themselves as "addicts" and do not approach conventional

treatment services until late in their problem development [2]. It is therefore important to find ways to motivate them into treatment earlier.

BACKGROUND:

Miller's Motivational Theory [3] has revolutionized the psychological treatment in the field of substance abuse. Clients previously considered not motivated and unreachable could be engaged and motivated. Motivational interviewing has been shown effective in randomized controlled trials in addictions of various types including opiates [4], alcohol [5] [6] [7] and smoking [8] [9] [10]. Such techniques have also been adapted to the treatment of other conditions involving change of lifestyles and impulse control like diabetes mellitus [11] [12], hypertension [13] [14], obesity [15] [16] hypercholesterolaemia [17], and HIV at risk [18].

A "Free Body Check-Up" programme was designed at Kwai Chung Hospital as an application of the motivational approach. It was promoted as a free health service for youth drug users to learn about their health conditions. There was no need for them to accept a label of an "addict" or a "patient". No contract to further treatment was required. The intervention was brief, consisting of two sessions in total. In the first session, clients received thorough physical, psychological and psychiatric assessment. In the next feedback session one week apart, the results of assessments were disclosed by a psychiatrist individually and confidentially employing the motivational interviewing techniques. It was postulated that this "Free Body check-up" programme would be an attractive service for youth drug users to ponder on their health, and their drug abuse problems. We also expected that the programme would enhance their readiness to change.

The main objective of this study is to test the hypothesis that motivational interviewing in the form of "free body check-up" followed by personalized feedback will be an effective strategy to attract early addicts, and that such early and brief intervention will produce significant and lasting results. Secondary objectives include looking at the demographic characteristics and drug abuse patterns among the subjects, and to examine factors affecting the engagement of clients in this study.

METHODOLOGY:

We adopted the study design of a randomized controlled trial. Inclusion criteria were: (1) 15-30 years of age of both sexes, (2) self report of use of illicit drugs within past

three months, and (3) willingness to give informed consent. Those who had contacted with substance abuse treatment agencies before, having non-entitled person status in Hong Kong, or having hearing, language or dialect problems were excluded. A total of 123 drug users were successfully recruited. All of them had no plan to quit drug use at the time of recruitment. 62 were randomized to the intervention group and 61 to the control group. The intervention, namely "Free Body Check-up Programme", consisted of two sessions. The first session was a thorough body check-up performed by multidisciplinary. Medical examinations were conducted by paediatricians. Physical fitness assessments including cardiopulmonary functions, body composition, muscle strength, flexibility and balance were assessed by a physiotherapist. Cognitive functions and intelligence were assessed by a clinical psychologist. Psychiatric assessments and mental examinations were performed by psychiatrists. The second session was an individualized feedback session conducted by a psychiatrist one week apart. Subjects in the control group were also given the check-up and feedback sessions as soon as they had finished their participation in this study. Thus, they completed all the scheduled assessments while they were waiting for their check-up, but they were not aware that they were in the control group.

OUTCOME EVALUATION:

There were three outcomes measures in this study. The first one measured the illicit drug use frequency. In this study an **occasional user** was defined as using illicit drug(s) less than once per month, while a **regular user** was defined as using illicit drug(s) once a month or more [19]. The percentages of regular users in both groups were compared between the two groups. The second outcome measure was based on the scores of our rating instrument. It was a self-rating questionnaire composed of the following six parts:

- Part 1: Smoking frequency and usage (SFU)
- Part 2: Alcohol frequency and usage (AFU)
- Part 3: Illicit Drugs frequency and usage (DFU)
- Part 4: Attitude towards smoking and alcohol (ASA)
- Part 5: Attitude towards illicit drugs (AD)
- Part 6 Self-esteem (SE)

They were extracted from *Botvin's Life Skills Training Student Questionnaire* (see Appendix 1), an evaluation instrument commonly used in researches on intervention and prevention of youth drug abuse [20]. It was designed so that the higher the score,

the higher the overall risk and usage of substance abuse. In particular, a high self-esteem score in Part 6 actually means low self-esteem. The third outcome measure was the number of subjects who were committed to further treatment at the end of the study. The baselines of these outcome measures were obtained at the start of the study. Two follow-up ratings were scheduled at 6 weeks and 6 months after the feedback session to assess the effect of the intervention.

STATISTICAL ANALYSIS:

Analyses were performed on SPSS for Windows (version 9.0), or SAS (release 8.0) if necessary. In this prospective longitudinal trial, data were collected in each individual at baseline and repeatedly during the two follow-ups one at 6 weeks and another at 6 months respectively. Continuous variables (e.g. scores) were compared by the Wilcoxon test for two independent groups. Categorical variables (e.g. sex) were compared by a Chi-squared test. The z-test was used to compare the proportion of binary variables between the two groups. The scores of the rating instrument over time (ie, at baseline, 6 weeks and 6 months) between the two groups were compared by using a repeated measures analysis of variance using the mixed procedure in the SAS System for Windows. Logistic regression analysis was used to identify possible factors affecting the engagement of drug abusers in this treatment adjusted for potential confounding variables. As we have made some 20 independent comparisons in the report, we used 0.02 rather than 0.05 as the alpha-error so as to reduce false positive results. In other words, we would expect 0.4 out of the 20 independent comparisons here turn out to be statistically significant purely due to the play of chance.

RESULTS 1: DEMOGRAPHIC CHARACTERISTICS AND DRUG ABUSE PATTERNS

DEMOGRAPHIC CHARACTERISTICS

Among the total of 123 subjects in this study, 70 (56.9%) were male. Their age ranged from 13 to 26 (mean=17.4 years \pm 2). 117 of them (95%) were single and came from nuclear family of three family members. 25 (20%) of them were from single-parent families. The average years of education was 9 (SD \pm 1.3), i.e. at Form Three level. 76 (62%) of them had average family income below the range of \$10001-20000 HK dollars. 52 (42.3%) of them were unemployed or school dropouts (see Table 1). Comparison of these demographic data between the intervention and control groups found no statistically significant difference.

Table 1: Baseline demographic characteristics of subjects in the study

	Intervention group (N = 62)	Control group (N = 61)	p- value	Total (N = 123)
Males (%)	55	59	0.568	56.9
Age (mean \pm SD)	17.4 \pm 2.2	17.3 \pm 1.9	0.942	17.4 \pm 2
Years of education (mean \pm SD)	8.9 \pm 1.4	8.9 \pm 1.2	0.992	8.9 \pm 1.3
Single status (%)	97	93	0.194	95.1
No. of household (mean \pm SD)	3 \pm 1	3 \pm 1	0.617	3 \pm 1
Single parent (%)	15	26	0.134	20.3
Living in public housing(%)	67.7	78.7	0.079	73.2
Living area (mean \pm SD)	483 \pm 338	433 \pm 197	0.173	458 \pm 279
Unemployed (%)	47	38	0.252	42.3
Family total income \leq 10001-20000 (%)	54.8	68.9	0.058	61.8

DRUG ABUSE PATTERNS

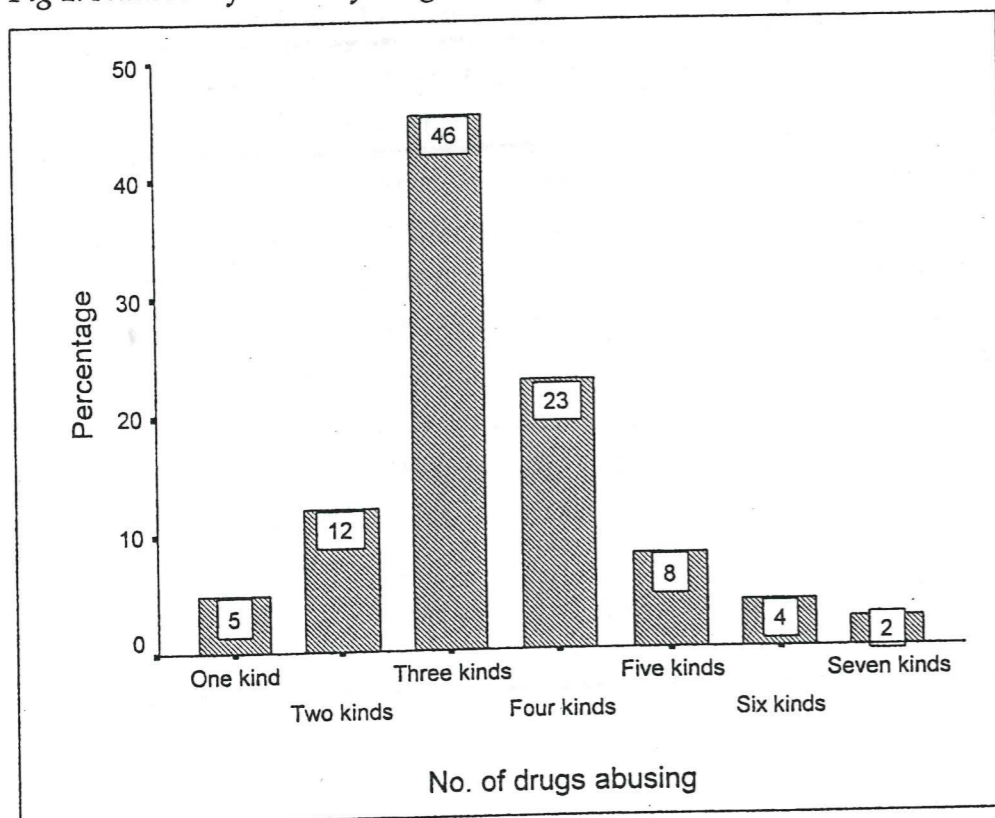
Multi-drug use

Only 6 subjects (4.9%) were single drug user, and the rest 117 subjects (95.1%) used more than one kind of drugs at the same time. The majority of them used three kinds (56 subjects, 45.5%) or four kinds (28 subjects, 22.8%) of different drugs. 10 subjects (8.1%) were using five types of drugs. Overall, 102 subjects (82.9%) were using more than three kinds of drugs at the same time. (see Table2, Fig1). Statistically, there was no significant difference between the two groups in the aspect of multi-drug use.

Table 2: Number of kinds of drug used by the subjects

No. of kinds of drug used	Total (N = 123)		Intervention group (N = 62)		Control group (N = 61)	
	No. of sub	%	No. of Sub	%	No. of Sub	%
One kinds	6	4.9	3	4.8	3	4.9
Two kinds	15	12.2	6	9.7	9	14.8
Three kinds	56	45.5	30	48.4	26	42.6
Four kinds	28	22.8	13	21	15	24.6
Five kinds	10	8.1	6	9.7	4	6.6
Six kinds	5	4.1	2	3.2	3	4.9
Seven kinds	3	2.4	2	3.2	1	1.6

Fig 1: Number of kinds of drug used by the subjects



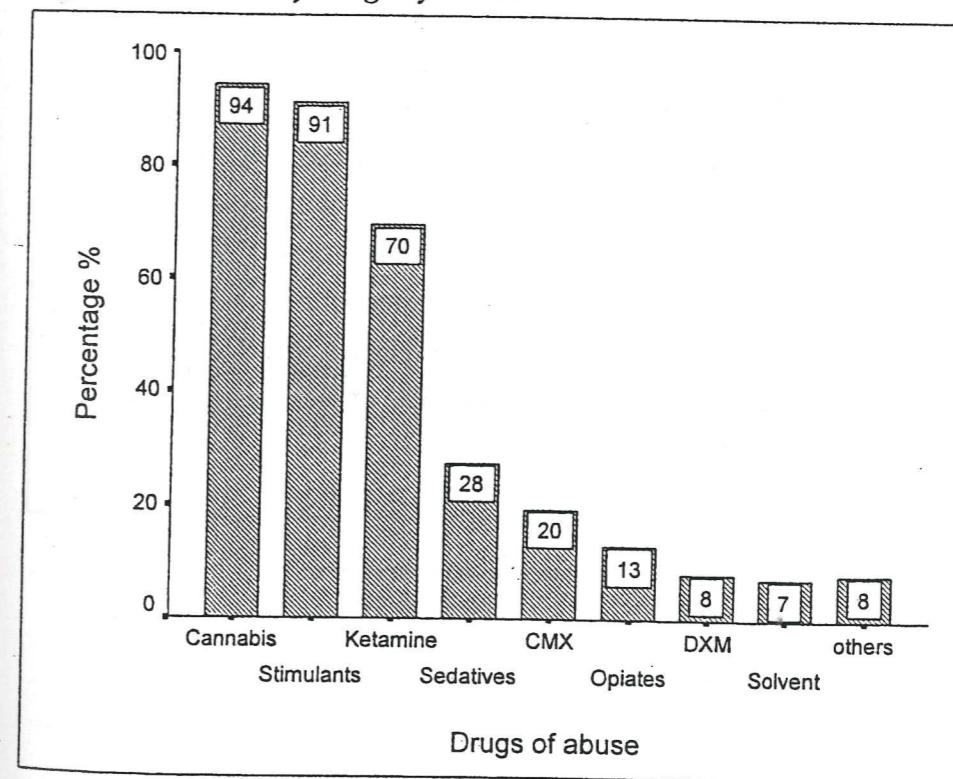
Prevalence of drugs of abuse

The most commonly abused drug among the subjects was Cannabis (116 subjects, 94.3%), followed by Stimulants (112 subjects, 91.1%) and Ketamine (86 subjects, 69.9%). There were 34 (27.6%) subjects abusing Sedatives and 24 (19.5%) subjects abusing Cough Mixture. Only 16 (13%) subjects were abusing Opiates (see Table 3, Fig 2). There was no statistically significant difference between the two groups in their choice of drugs.

Table 3: Prevalence of drugs of abuse

Drugs of Abuse	among all subjects (N = 123)		Intervention group (N = 62)		Control group (N = 61)	
	No. of Sub	%	No. of Sub	%	No. of Sub	%
Cannabis	116	94.3	57	91.9	59	96.7
Stimulants	112	91.1	56	90.3	56	91.8
Ketamine	86	69.9	48	77.4	38	62.3
Sedatives	34	27.6	18	29	16	26.2
Cough mixture	24	19.5	14	22.6	10	16.4
Opiates	16	13	6	9.7	10	16.4
Dextromethorphan	10	8.1	4	6.5	6	9.8
Solvent	9	7.3	5	8.1	4	6.6
Others	10	8.1	5	8.1	5	8.2

Fig 2: Prevalence of drugs of abuse



Duration of drug use

Overall, the average duration of drug use was 31.5 months (SD ± 22.4), with the range between 3 months to 156 months. The average duration of use was longest for Cannabis (30.5 months, SD ± 22.30), followed by Opiates and Sedatives with average

months of 24.4 and 23.1 respectively. For Stimulants, its duration was 19.7 months. Besides, there was no statistically significant difference between the intervention and the control group in their duration of drug use.

Table 4: Duration of drug use

Drugs	Mean Duration (months)	S.D. (±)
Cannabis	30.5	22.3
Opiates	24.4	24.3
Sedatives	23.1	29.5
Stimulants	19.7	12.4
Cough mixture	15.5	7.3
Ketamine	14.8	8.5
Solvent	13.7	4.5
Dextromethorphan	13	7.3
Others	20	14.5

Initial drug use pattern

67 (54.5%) subjects started with one kind of drug and progressed to more types of drug use later on. Among them 50 (40.7%) subjects started with cannabis and 13 (10.6%) started with stimulant, while only 2 (1.6%) of them start with Opiates (see Table 6). On the other hand, 18 (14.6%) subjects started with two drugs, 22 (17.9%) subjects started with three drugs, and 11 (8.9%) subjects started with four types of drugs at the same time (see Table 5). There were 5 (4.1%) subjects who started with five types of drugs. For those started with two types, 8 (6.5%) of them began with the Cannabis and Stimulants at same time.

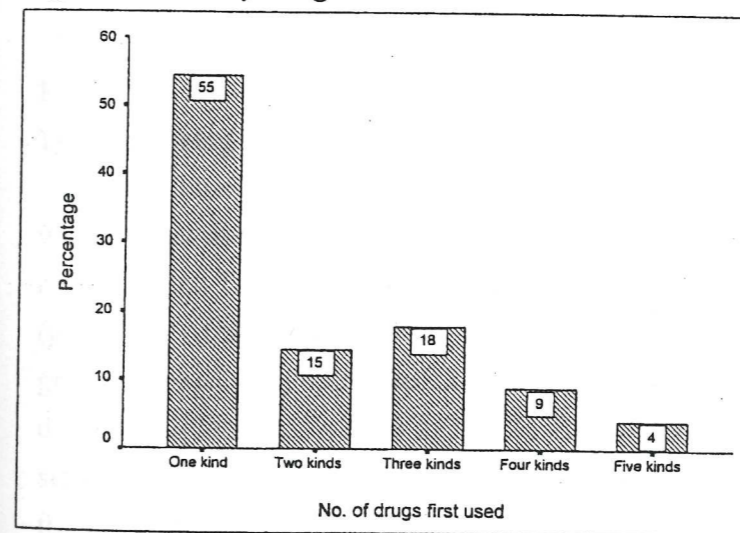
Table 5: Number of drugs started with

No. of drugs start with	No. of Subjects	Percentage %
(N = 123)		
One kind	67	54.5
Two kinds	18	14.6
Three kinds	22	17.9
Four kinds	11	8.9
Five kinds	5	4.1

Table 6: Initial drug use patterns

No. of drugs start with	Kinds of drugs start with	No. of Subjects	Percentage %
(N = 123)			
1	Opiates	2	1.6
1	Cannabis	50	40.7
1	Stimulants	13	10.6
1	Ketamine	1	0.8
1	Solvent	1	0.8
2	Cannabis and Stimulants	8	6.5
2	Cannabis and Cough Mixture	4	3.3
2	Sedatives and Stimulants	1	0.8
2	Ketamine and Stimulants	4	3.3
2	Opiates and Sedatives	1	0.8

Fig 3: Number of drugs started with



RESULTS 2: STUDY OUTCOME

RESPONSE RATES FOR THE ASSESSMENTS:

All 123 subjects had completed the baseline Assessment One. 92 (74.8%) of them finished Assessment Two at six weeks' follow up. At six months' follow up, 87 (70.7%) subjects completed Assessment Three. Overall, the response rates for all assessments were greater than 70%. The difference in drop out rate between the intervention and control group was not statistically significant (see Table 7).

Table 7: No. of subjects in different stage of the assessment

	Total no. of subjects	Intervention Group	Control Group
Assessment 1	123	62	61
Assessment 2	92	50	42
Assessment 3	87	46	41

ESTIMATION OF EFFICACY OF THE TEST INTERVENTION:

1). Comparing the frequency of illicit drug use between the two groups:

At the beginning of the study, 27 (43.5%) of the 62 subjects in the intervention group were regular users while 25 (41.0%) among the 61 subjects in the control group were regular users. The difference between the two groups was not statistically significant ($p = 0.77$). At **six weeks'** follow-up, the percentage of regular users in intervention group dropped from 43.5% to 12.9%, while the percentage in the control group dropped slightly from 41.0% to 36.1%. The difference was highly statistically significant ($p=0.0001$). At **six months'** follow-up, the percentage of regular users in the intervention group was maintained at 17.7%, while that in the control group was at 37.7%. The difference between them remained highly statistically significant ($p = 0.001$). The above results were based on a treatment-as-received analysis in which all those lost to follow-up were excluded.

We also conducted the intention-to-treat analysis, that included every randomized patient and assumed that all dropout cases had increased their usage and became regular users. This may lead to underestimation of the benefits from the intervention. The differences between the two groups at the two time points remained statistically significant (See Table 8 and Fig. 4). Thus, both treatment-as-received analysis and intention-to-treatment analysis yielded similar results. However, the wide confidence interval suggests that a larger trial will be required to narrow down the 95% confident

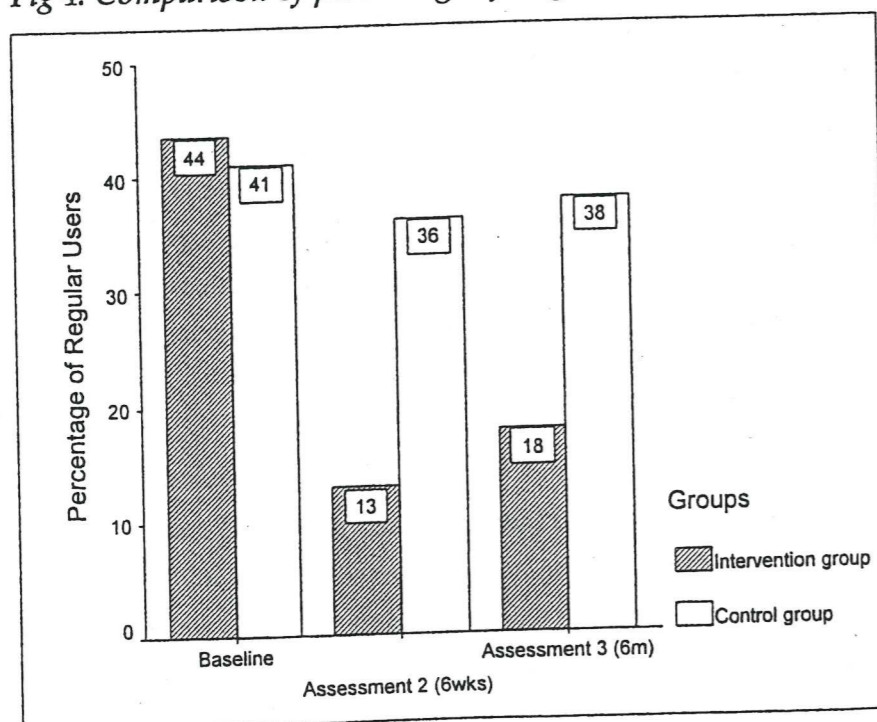
interval (CI) within which the true efficacy may fall.

Table 8: Comparison of percentage of Regular Users in both groups

	Intervention group	Control group		P-value	Risk difference (%)	95% C.I.			
		% Regular users / Total	% Regular users / Total			Lower (%)	Upper (%)		
TREATMENT-AS-RECEIVED									
Assessment 1	43.5	27/62	41.0	25/61	0.77	2.5	-15.9	20.0	
Assessment 2	12.9	8/50	36.1	22/42	0.0001	-23.2	-55.0	-18.0	
Assessment 3	17.7	11/46	37.7	23/41	0.0011	-20.0	-52.0	-13.0	
INTENTION-TO-TREAT									
Assessment 1	43.5	27/62	41.0	25/61	0.77	2.5	-14.9	20.0	
Assessment 2	32.3	20/62	67.2	41/61	<0.001*	-34.9	-51.9	-17.9	
Assessment 3	43.5	27/62	70.5	43/61	0.003*	-27	-40.9	-6.5	

*p < 0.02 statistically significant

Fig 4: Comparison of percentage of Regular Users in both groups



2). Comparing the scorings of the evaluation instrument

The various scores for each group at different assessments are summarized in Table 9. The changes of scores for each part are illustrated in Figures 5-11.

Table 9: Scores of the intervention and the control groups at different times of assessments

Assessment	Scoring	Intervention group	Control group	Mean Diff.	P-value (Wilcoxon)	95% C.I.	
						Upper	Lower
I (Baseline)	SFU	24.15 (±2.07)	23.90 (±2.05)	0.24	0.5116	-0.49	0.98
	AFU	29.39 (±4.62)	30.67 (±3.65)	-1.29	0.1412	-2.77	0.20
	DFU	15.32 (±2.13)	15.16 (±1.82)	0.16	0.4518	-0.55	0.87
	ASA	59.73 (±5.47)	59.31 (±6.17)	0.41	0.2540	-1.67	2.50
	AD	29.29 (±2.65)	28.39 (±4.51)	0.9	0.1702	-0.42	2.21
	SE	115.00 (±11.53)	113.31 (±10.13)	1.69	0.5152	-2.19	5.56
	SFU	23.46 (±2.96)	24.19 (±1.85)	0.79	0.0554	0.14	1.45
	AFU	28.34 (±4.69)	28.98 (±4.77)	-0.81	0.2957	-2.42	0.81
	DFU	13.78 (±1.84)	15.12 (±2.17)	1.6	0.0046*	0.57	2.63
	ASA	58.20 (±6.37)	57.26 (±5.50)	-0.41	0.5089	-2.99	2.16
II (6 weeks)	AD	27.46 (±3.11)	29.43 (±4.74)	4.14	0.0001*	1.92	6.36
	SE	115.32 (±10.76)	116.21 (±10.73)	0.53	0.8352	-3.07	4.12
	SFU	23.28 (±3.18)	24.22 (±1.48)	0.99	0.017*	0.01	1.92
III (6 months)	AFU	28.30 (±5.37)	29.17 (±4.66)	-0.78	0.2247	-2.71	1.14
	DFU	14.57 (±2.25)	15.63 (±1.77)	1.43	0.0034*	0.53	2.33
	ASA	56.39 (±6.09)	56.66 (±5.15)	1.96	0.1476	-0.51	4.43
	AD	26.61 (±4.50)	27.56 (±3.03)	3.78	0.0005*	1.87	5.69
	SE	113.83 (±9.80)	117.24 (±9.85)	1.31	0.9627	-3.3	5.93
	SFU	23.28 (±3.18)	24.22 (±1.48)	0.99	0.017*	0.01	1.92

* P < 0.02 statistically significant

Fig. 5: Scores for Smoking Frequency and Usage (SFU)

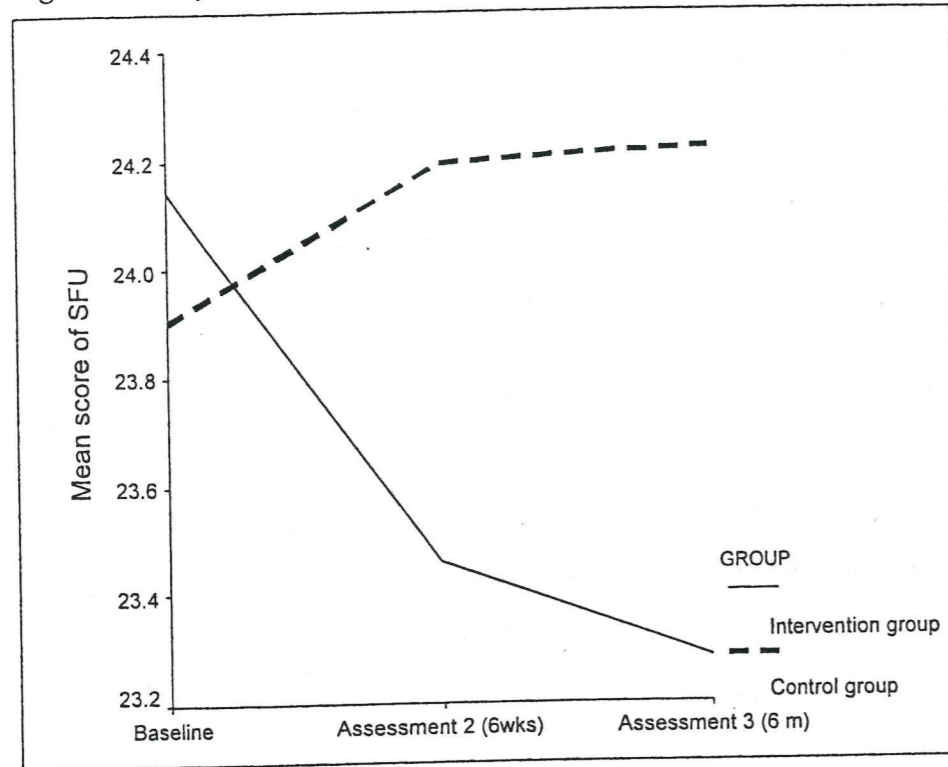


Fig. 6: Scores for Alcohol Frequency and Usage (AFU)

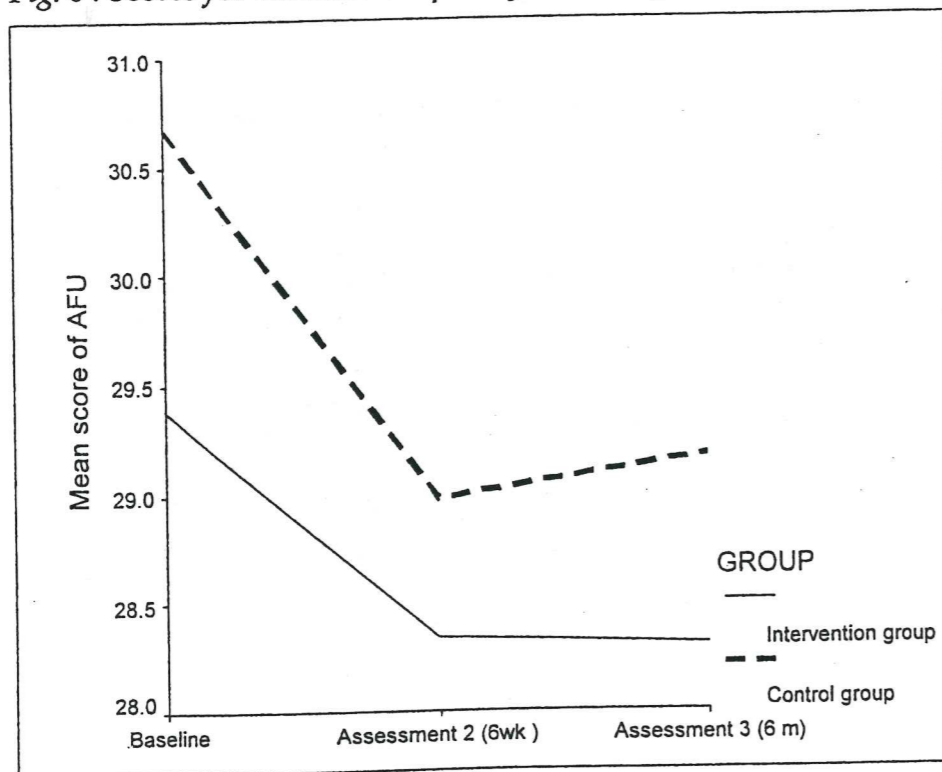


Fig. 7: Scores for Illicit Drugs Frequency and Usage (DFU) (*P < 0.02 statistically significant)

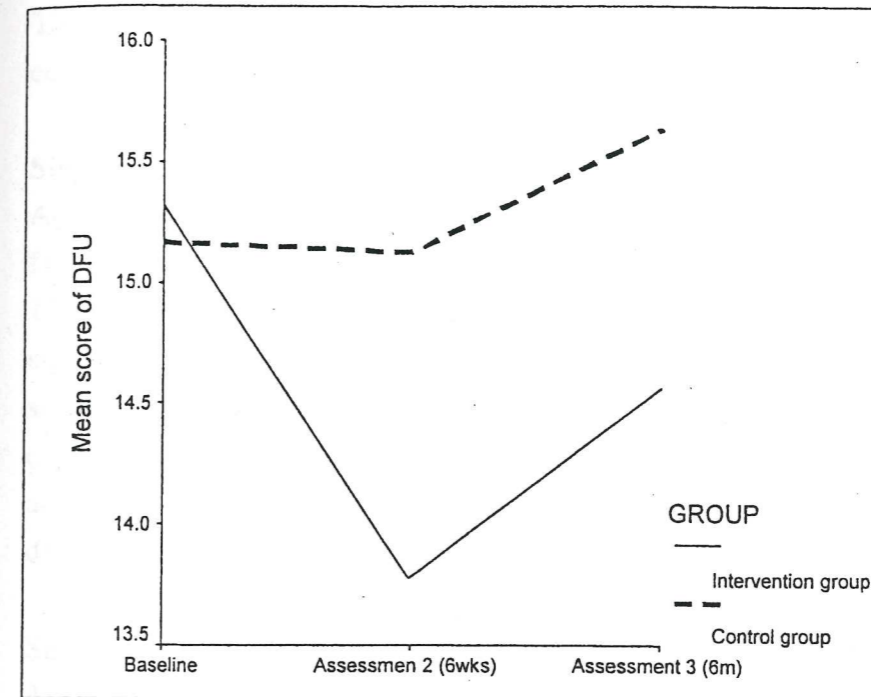


Fig. 8: Scores for Attitude of Smoking and Alcohol (ASA)

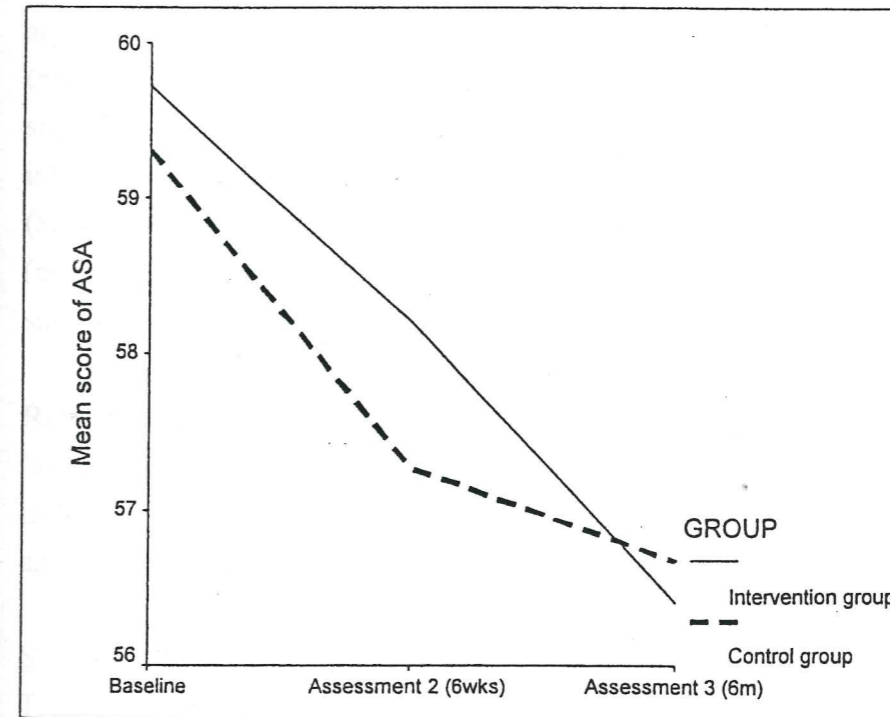


Fig. 9: Scores for Attitude of Drug Usage (AD)
 (*P < 0.05 statistically significant)

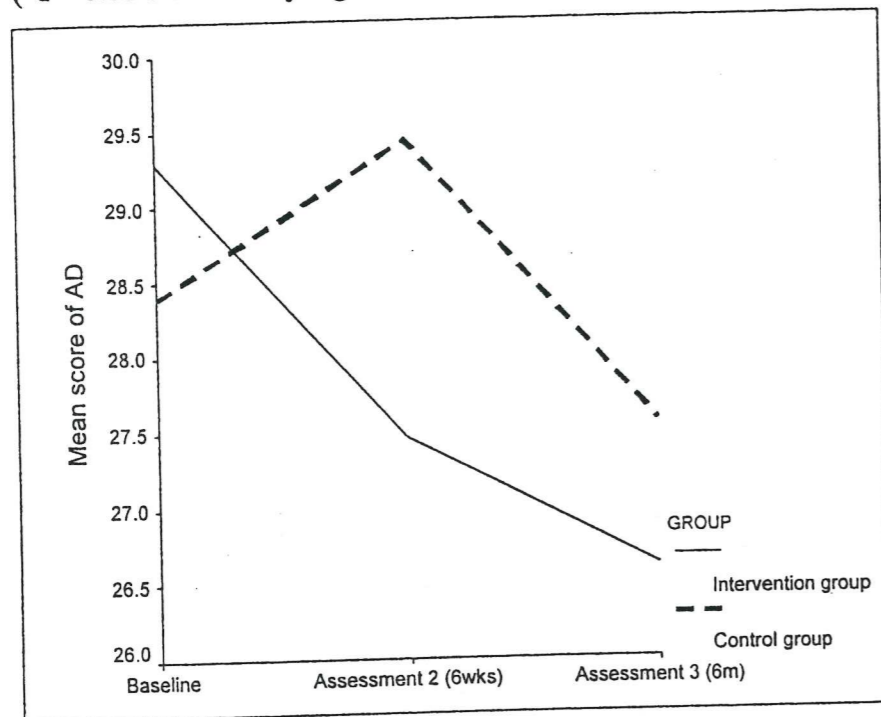
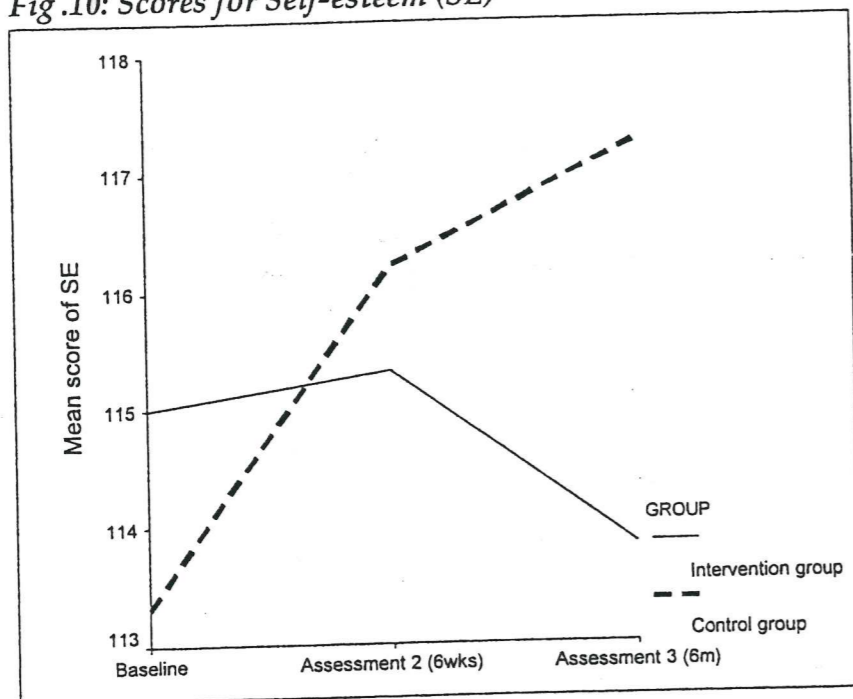


Fig. 10: Scores for Self-esteem (SE)



Comparison of baseline assessments between the two groups by non-parametric analysis:

There was no statistically significant difference found between intervention and control groups in the factors examined, suggesting that randomization was successful.

Significant results for Assessment 2 (six weeks' outcome):

At six weeks' follow up, there were two positive findings. The mean score for Illicit Drugs Frequency and Usage (DFU) was lower in the intervention group (mean = 13.78) than in the control group (mean = 15.12). The difference was statistically significant (p=0.0046), meaning lower illicit usage in the intervention group. The scores for Attitude towards Illicit Drugs (AD) was also lower in intervention (mean=27.46) than in the control group (mean=29.43). A low score indicated negative attitude towards illicit drugs and presumably a lower likelihood of drug use. The difference was statistically significant with p value equaled to 0.001. (See Table 9)

Significant results for Assessment 3 (six months' outcome):

At six months' follow up, there were three positive findings. The mean score for Illicit Drugs Frequency and Usage (DFU) was lower in the intervention group (mean = 14.57) than in the control group (mean = 15.63). The difference was statistically significant (p=0.0034), meaning lower illicit usage in the intervention group. The scores for Attitude towards Illicit Drugs (AD) was also lower in intervention (mean=26.61) than in the control group (mean=27.56) The difference was statistically significant (p < 0.0005), indicating a more negative attitude towards illicit drugs in the intervention group. In addition, the mean score for Smoking frequency and usage (SFU) was lower in the intervention group (mean = 23.28) than in the control group (mean = 24.22). The difference was statistically significant (p=0.017), meaning less smoking in the intervention group. (See Table 9)

Repeated measures analysis of variance:

We also conducted repeated measurements analysis of variance. As the repeated measurements of the scores were unequally spaced (baseline, 6 weeks, 6 months) the analysis was adjusted by using a time series covariance structure.

SFU (fig. 5):

There was strong evidence to indicate that an intervention difference in the SFU score was changing over time (p=0.0119, Table 10). This indicates that intervention differences change over time. In other words, the difference in SFU scores for the intervention groups over time is greater than can be expected by chance alone. After

the initial baseline measurement, the mean SFU scores for the intervention groups cross and then separate at week 6 and month 6.

AFU (fig. 6):

There was strong evidence to indicate an AFU scoring trend over time ($p=0.0026$, Table 10). There is a difference in the mean AFU scores across time but the intervention scores remain parallel throughout the entire period of assessment.

DFU (fig. 7):

There was strong evidence to indicate a difference in the DFU score between the intervention groups ($p=0.0034$, Table 10), strong evidence to indicate a DFU scoring trend over time ($p=0.0029$) and strong evidence to indicate that an intervention difference in the DFU score was changing over time ($p=0.0048$). The mean DFU scores decrease at week 6 after baseline but rebound at month 6 for both intervention groups. After the initial baseline measurement, the mean DFU scores for the intervention groups separate at week 6 and month 6.

ASA (fig. 8):

There was strong evidence to indicate an ASA scoring trend over time ($p=0.0003$, Table 10). The mean ASA scores for both intervention groups gradually decrease from baseline.

AD (fig. 9):

There was strong evidence to indicate an AD scoring trend over time ($p=0.0045$, Table 10) and strong evidence to indicate that an intervention difference in the AD score was changing over time ($p=0.0115$). After the initial baseline measurement, the mean AD scores for the intervention groups cross, then separate at week 6 and then merge at month 6.

Table 10: Results of repeated measures analysis of variance

Scoring	Test of hypothesis for between subject effects	Test of hypothesis for within subject effects	
		Time (Main Effect)	Time*Intervention (Interaction)
Effect	Intervention (Main Effect)	Time (Main Effect)	Time*Intervention (Interaction)
SFU	0.2941	0.4980	0.0119*
AFU	0.2205	0.0026*	0.5592
DFU	0.0034*	0.0029*	0.0048*
ASA	0.6929	0.0003*	0.6241
AD	0.1184	0.0045*	0.0115*
SE	0.9622	0.2112	0.2787

* $P < 0.02$, statistical significance indicates that intervention differences change over time

3). Comparing the number of subjects committed to treatment services between the intervention and the control group

At the end of the study, 9(14.5%) of the subjects in the intervention group were willing to register in our clinic for assistance to quit drug use and for treatment of psychiatric symptoms. None (0%) of the subjects in the control group were willing to commit to treatment services. The difference is highly significant ($p=0.003$).

Table 11: Comparing the number of subjects committed to treatment services between the intervention and the control group with the study period

	Intervention Gp (N =62)	Control Gp (N =61)	P-value
No. of subjects committed to further treatment	9 (14.5%)	0 (0%)	0.003*

* $P < 0.02$, statistically significant

RESULTS 3: FACTORS AFFECTING THE ENGAGEMENT OF EARLY DRUG ABUSERS IN TREATMENT.

An attempt is made here to compare between those who were engaged well in our study (attended all three assessments) and those who were engaged poorly (missed both follow up assessments). It must be emphasized that this study was not designed to look at this aspect, and the compared groups were not randomly allocated, the numbers of poorly engaged subjects in this study were relatively small. Given these drawbacks, we believe that there may still be of some value for exploration so as to generate new research hypotheses.

LOGISTIC REGRESSION ANALYSIS

Logistic regression analysis was performed to identify the factors affecting the engagement of drug abusers in this treatment. Among all the potential factors under analysis (including age, sex, years of education, marital status, from single parent family, number of kinds of drugs of abuse, and individual drugs of abuse), only **Cough Mixture Use** was found to be a significant predictor for poor engagement. The odd ratio of being poorly engaged in treatment among those who addicted cough mixture was 11.29, and its 95% confidence interval was 1.94 to 65.88. As the value of 1 was outside the interval range, it implies that the odds ratio was significant at 5% level. It means that the risk of being poorly engaged for a person who used cough mixture was almost **11 times** as a person who did not.

COMPARISON OF SCORINGS BETWEEN THE WELL-ENGAGED AND POORLY ENGAGED GROUPS

Scoring for Alcohol Frequency and Usage (AFU) was significantly higher in the poorly engaged group (mean=32.00 \pm 4.47) than in the well-engaged group (mean=29.26 \pm 4.43). The difference was statistically significant, meaning high alcohol consumption in the poorly engaged group (p=0.032).

Table 14: Comparison of scorings between the well-engaged and poorly engaged groups

Scoring	Well-Engaged group		Poorly Engaged group		P-value	95% C.I	
	Mean (\pm SD)		Mean (\pm SD)			Upper	Lower
SFU	23.89	(\pm 2.40)	24.00	(\pm 1.97)	0.861	-1.35	1.13
AFU	29.26	(\pm 4.43)	32.00	(\pm 4.47)	0.032*	-5.22	-0.26
DFU	15.38	(\pm 1.96)	15.18	(\pm 1.47)	0.683	-0.80	1.21
ASA	58.74	(\pm 5.68)	60.24	(\pm 4.84)	0.318	-4.46	1.47
AD	28.59	(\pm 4.00)	30.53	(\pm 4.42)	0.081	-4.12	0.24
SE	114.40	(\pm 11.02)	111.24	(\pm 11.04)	0.298	-2.97	9.29

*P < 0.02, statistically significant

DISCUSSIONS:

1. The drug use patterns among our subjects were very different from the previous reported data in Hong Kong. Newer psychoactive substances were found to be much more prevail than opiate type of drugs, and that the problem of multi-drug use is commoner than expected. This may indicate an unmet need among the unrepresented psychoactive users. As the majority of existing drug treatment services are for opiate addicts, there may be a need to explore new models of intervention with low stigma and low-threshold to broaden the base of treatment services.
2. It is evident that the "Free Body Check-up" programme was successful in attracting underserved drug users to "come out" and ponder on their drug use problems. We had no problem in recruiting subjects. In fact, we received continual referrals for check-up even after our quota was exceeded.
3. The "Free Body Check-up" programme was found to be an effective intervention for reducing drug use frequency among the trial subjects. The effect appeared at week 6 and last at least up to 6 months. In the treatment-as-received analysis, the percentages of regular users in both groups at the two follow-ups were lower than the baseline figures, and the differences were highly statistically significant. In this scenario, the intervention was very effective in bringing down the drug usage in the subjects. It is interesting to see that even the control group has

decreased consumption as compared with the baseline. It is possible that subjects in the control group may have heard of their friends' body check up results and pondered on their own drug use even they have not yet attended a check-up themselves. In the intention-to-treat analysis, which may have underestimated the effect of the intervention, statistically significant differences between the intervention group and the control group were found. The high percentage of regular users in the control group may partly be explained by the assumption we took that all dropouts had deteriorated into regular users. It is also relevant to point out that this study was conducted during an epidemic period of psychoactive drug use in Hong Kong. It is likely that our intervention could help drug users maintain at the low and occasional usage when there might be a tendency for occasional users to increase their usage due to more drug availability and higher peer pressure.

4. In repeated measures analysis of variance, there is a change over time in AFU, DFU, ASA and AD scores ($p=0.026, 0.029, 0.003, \text{ and } 0.0045$ respectively). More importantly, differences were observed in SFU, DFU and AD between the treatment and the control groups ($p=0.0019, 0.0048, \text{ and } 0.0115$ respectively) during the follow-up period, indicating that the intervention had effect on these scores. In other words, the differences in the scores between the two compared groups over time were greater than those expected by chance alone. These results confirmed those from non-parametric analysis, except that p-value for SFU is borderline at 6 weeks and below 0.01 at 6 months. It follows that there are evidences for reduction in usage of illicit drugs, development of negative attitude towards illicit drugs, and decrease in smoking among the subjects in the intervention group, much more so than those in the control group. This is an interesting finding, as it implies that the effects of this intervention would not be restricted to any type of illicit drugs. The effects would even extend to smoking and drinking. Therefore, such intervention is applicable to a changing trend of drug abuse. We would like to point out here that some of the differences in scores are small. Although they are statistically significant, it may not necessarily means that they are clinically significant. These results should be interpreted with caution.
5. A significant number from the intervention groups made up their mind to receive assistance for quitting drugs and to receive treatment of complications at the end of the study. Therefore, although this programme took the form of a brief intervention, it served as a precursor or gateway to more intensive treatments.

6. Favourable feedbacks were collected from social workers who witnessed their clients benefited from this programme (see Appendix 2). This approach seems to be a welcomed asset to the frontline social workers.
7. Except for cough mixture use, there is no other significant factor identified among the subjects for prediction of engagement in treatment. There is little literature on cough mixture abuse available, though this is a common and perhaps unique form of substance use in this locality. More researches in this area is required to study clients and their needs in more detail.
8. The scores for alcohol usage were significantly higher among the poorly engaged subjects. It is not sure if such finding bears any real significance in clinical practice. However, it is relevant here to reflect on services for alcohol abuse. In Hong Kong, alcohol abuse receives much less attention than the abuse of other substances. It is not included in monitoring statistics. Counselling and treatment opportunities are also less available. It is recommended that screening and intervention on alcohol should be integrated into the existing services. There is only one specialized alcohol treatment clinic at the time. More provisions should be established to meet the needs in the community. Primary prevention should also focus more on alcohol in addition to other substances. It is time to take on this "forgotten" battle.
9. We originally proposed a two-year research of \$1,000,000 budget. Unfortunately, the approved budget was cut down to \$300,000 and the duration was shortened by half. Within the limited time and resource, we did not perform the formal validation of the translated form of our instrument. This is a limitation of this study.
10. The wide confidence intervals in some statistical analyses highlighted that the sample size was not large enough. The original proposal was to recruit double the number of subjects, but it was scaled down due to limited funding allocation. If resources allowed, it would also be valuable to follow up the subjects for a longer period to see if the intervention effect would sustain longer. Another limitation in this study was the contamination of the controls. Although the controls were put on waiting list, they might have heard of their friends' body check-up results. It was observed that physical abnormalities in some subjects resulted in decreased drug use among other peer members, although they did not attend check-ups themselves. However, in such cases the difference between the intervention and control groups would have been under-estimated.

RECOMMENDATIONS:

This approach holds promise to tackle the new wave of psychoactive substance abuse in Hong Kong. The results of this study shed light on a new direction of provision in the area of early intervention. Lower threshold service of this kind will complement the conventional treatments, and will provide apt intervention to drug users before late complications developed. It will be a great asset to the frontline workers, enhancing the integration and cooperation of medical and social services. It is not bound to the existing model; there can be other innovative applications.

We would like to make the following recommendations to help implement this new model of intervention in Hong Kong.

1. Commitment from the relevant authorities:

The substance abuse clinics in Hong Kong operate on the specialist clinic model. This project is a one-off early intervention programme sponsored by the ACAN research funds. Upon its termination, the project had come to an end. In order to implement early intervention of this kind into regular service provision, it is essential to have commitment from the Government and the Hospital Authority, so that the necessary resources and priority will be allocated. This may be set as an agenda item in the Treatment and Rehabilitation Sub-committee of ACAN for discussion and implementation.

2. Sufficient staff provision:

The substance abuse clinics are working at their full capacities. The existing manpower is not likely to be sufficient for development of a new early intervention service like this. Additional manpower allocation is required.

3. Training provision:

Skillful application of motivating counseling is considered the core element of this intervention programme. Opportunity for training and practice in motivational interviewing should be made available for the relevant staffs. Books and audiovisual training materials are considered beneficial for the development of involved workers.

4. Suitable clinic settings:

An assessable, non-threatening, non-stigmatizing and professional setting is considered desirable for client acceptability. Possibility of out-reaching to the community and conducting check-ups in Youth Centres or a mobile van had been considered. These options deserve further investigation.

5. Partnership between medical staff and out-reaching social services:

A good working relationship and seamless cooperative between medical staff and the out-reaching social workers is necessary for effective and smooth programme running. Networking between the substance abuse clinics and out-reaching social services is recommended as this is considered the basis for early engagement of psychoactive drug abuse problems.

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APPENDIX 1: FEEDBACKS FROM PARTICIPATING SOCIAL WORKERS

HKFYG Tsuen Kwai Out Reaching Team 1 Mr Chan

對濫用藥物青少年有一定程度的警惕性，由其對現今部份藥物的影響並不明顯，青少年很難發現它們對身體的傷害，身體檢查配合社工跟進輔導有明顯成效。

HKFYG Tsuen Kwai OUT REACHING Team 1 Miss Li

個案認為身體檢查有了解個人之健康狀況

HKFYG Tsuen Kwai OUT REACHING Team 1 Miss Lai

個案認為身體檢查有助了解個人之健康狀況，而且亦能澄清一些 talk drug 對健康帶來影響之誤解，故值得繼續舉辦，檢查時若能透過醫生之專業角色向個案提供有關濫藥之禍害之資料，對個案會更有說服力。

HKFYG Tsuen Kwai OUT REACHING Team 1 Miss Chow

覺得可以知道自已的情況，即時有些震撼作用。並了解自己的影響。

HKFYG Tsuen Kwai OUT REACHING Team 2 Miss Chan

對濫用藥物的青少年非常重要，有警醒他們的作用，參加個案皆在「身檢」後逐步減少濫藥，開始留心濫藥的知識，並介紹「身檢」予其他相關的群輩，惜名額有限，工作人員陸續接到個案有此要求。於2月4日組織了組群向李紹鴻反映了政府設立免費身體予濫藥者，希望有所跟進。

HKFYG Tsuen Kwai OUT REACHING Team 2 Mr Li

身體檢查計劃讓參加者了解自己的情況，同時予以他們意識減少濫藥行為。另外，醫生能夠提供專業意見，參加者更加會遵從醫生的專業指導，使濫用者逐漸遠離毒品。

HKFYG School Social Work Team Miss Tung

此計劃對受助者十分有幫助，身體檢查以及醫生悉心的講解令受助者提昇了不少對藥物濫用的知識與警覺。

YMCA Tsing Yi OUT REACHING Team Mr So

個案經常濫用 fing 頭，其後檢驗出有「心律不正常」而可致命的情況。雖然案主仍繼續濫用 fing 頭，但已較以往減少一半或以上的次數，亦能重視其身體健康而排期作覆診；足見此計劃能提升其對個人身體健康的重視。換言之，個案能正視其濫藥行為！希望此計劃能獲得資源而繼續發揮其預防及教育的效用。

另一個案因長期濫用大麻及四號海洛英，導致記憶力嚴重衰退；因此個案極重視報告中「記憶力」的描述。若能在此方面更加具體及更詳細解釋，對個案的正面影響更深遠！個案非常認同其報告的描述，更促使其作日後的覆診行動。此。

計劃的意義既深且遠，無論對間歇濫藥者或慣性濫藥者，都能起警醒，進而正視個人濫藥問題的潰害。

YMCA Tsing Yi OUT REACHING Team Miss Leung

驗身結果令案主驚覺自己身體狀況走下坡，更注意吸煙及濫藥的不良影響，另外，另一案主在驗身後濫藥情況有改善，配合找到工作，使案主濫藥頻率大減。

YMCA Tsing Yi OUT REACHING Team Miss Tsang

一個案認為此計劃好處可以免費檢查身體，他覺得醫生的解釋很詳細，同時報告亦引起他對自己身體的關注，及亦願意嘗試暫停用藥。另一案主頗受身體檢查之影響，尤其他發現濫藥對他的腦部損害，能使他的動機不用藥。另一案主雖然在計劃中(身體檢查)，發現自己的身體基於濫藥而引致流鼻血，但他仍然認為不會因此而減少用藥，他覺得不會巧合因此有病。

YMCA Shatin OUT REACHING Team Miss Pang

非常好，安排妥善。

YMCA Shatin OUT REACHING Team Miss Tsang

計劃能讓年青人注意自己的身體健康狀況，大部份年青人對於藥物對精神方面的損害並不認知或不願意承認。有些年青人於聽取報告後情緒輕微波動，如不認同自己已受藥物之影響，對自己身體狀況有警覺性。其中一位參加者確實因為擔心自己身體健康緣故而已停止服藥。而其中4人亦減少服用之頻密次數，雖然可能會有其他因素之影響，但據年青人所表示身體亦為其中一個因素，故此相信此計劃是對這群濫藥之年青人發揮其戒藥動機，因為他們對於專業意見極為重視。

HK Playground Upper Kwai Chung Mr Kum

本人覺得這是一個非常有義意的計劃，透過由主診醫生直接的給與對誤用藥物的訊息，案主更能認清誤用藥品的害處更關心自己的健康。

HK Playground Upper Kwai Chung Miss Wong

可讓參加者了解濫用藥物後對身體的真正影響，尤其由專科醫生親自講解，可提升說服力。

HK Playground Wan Chai OUT REACHING Team Miss Woo

身體檢查後沒有將個案戒藥跟進轉介，若身體檢查改為入手點以助個案戒藥及把時間縮短，效果則更為理想。心理醫生，兒科醫生及心電圖服務前之問卷(濫藥情況)重覆，若可覆印減省時間，增加效率。

HK Playground Kwai Lei OUT REACHING Team Miss Wong

初期參加者聽取報告時沒有社工陪同，以致他們很快忘記了結果內容，因他們大都沒有記性，有不明白亦不懂問。後期有社工陪同則較好，可讓社工協助或跟進內容上的重點。

早期報告用英文撰寫，參加者即使翻閱亦不明白，後期改為由中文則好得多，使他們更清晰及可作參考。

檢查內容詳盡，醫護人員非常友善，使參加者感覺良好。

檢查結果對參加者濫用藥物有少許阻嚇作用，及感受較深。這是非常有創意及具體的計劃，希望能藉此試驗計劃爭取到有關資源和伸延成為長期計劃。

HK Playground Kwai Lei OUT REACHING Team Miss Yu

對服務對象來說是一項很有價值意義的計劃，雖他們仍繼續冒險服食危險性藥物，但至少他們知道因濫用藥物自己的身體損害情況狀態，這能給予他們一個警覺的訊號要減少服食份量，如這計劃能日後繼續推展，相信能使更多濫藥的青少年有所裨益受惠。

HK Playground Kwai Lei OUT REACHING Team Miss Cheung

身體檢查計劃有助個案提高戒藥動機，可惜輪候時間較耐，個案可能因此熱情大減而放棄驗身。而計劃中最能吸引個案的是全免費而成本高的身體檢查以及專業的醫護人員參予。

HK Playground Mongkok OUT REACHING Team Miss Kong

對於身體因濫用藥物而出現明顯反應及後遺症的青年人來說，此計劃確實有助他們了解自己的身體狀況，從而作出抉擇，青少年往往受原本身處的環境所困擾和引誘，未必每個也能就此醒覺。

HK Playground Mongkok OUT REACHING Team Miss Chow

會個案提昇關注自己身體及堅持戒除濫用藥物的動機。

HKCS Yuen Long OUT REACHING Team Mr Fung

驗身項目精細，醫生回饋及報告表達非常清楚，令個案十分接受。4名個案均稱所接觸的濫藥訊息媒介中，醫生建議對他們有最大影響。唯重覆3次做同一份問卷，令他們有點厭煩。建議繼續舉行，並與社會服務機構配合，以合適活動去維持個案動機。

HKCS Yuen Long OUT REACHING Miss Ying

案主面見醫生後，表示要即時停止濫藥，此計畫令他清楚有系統地明白自己的身體狀況，張醫生的講解很清楚及有耐性，案主覺得很深刻。

HKCS Yuen Long OUT REACHING Miss Wan

應盡量減省使用時間，例如盡量在同一日內完成所有檢查，及問卷可在之前完成。此外，有關工作人員或醫護人員應避免在參加者面前提及其他參加者姓名或透露任何其他資料。參加者對其智商測試最關注及印象深刻。整體來說此計劃本人認為非常有意義及參與之工作人士均很熱心及態度真誠，令參加者感到被尊重，對醫務人員或有關濫藥服務留下良好印象，減少了將來他們求助的阻礙，而此計劃亦能為參加者帶來藥物問題的衝激和反思。

BGCA Cheung Sha Wan OUT REACHING Team Miss Li

身體檢查所包含範圍廣範，醫生講解報告詳細易明，令參加者清楚藥物對自己做成的影響，從而認真面對此問題。另外，另一參加者由初期想了解藥物對其影響到後期轉為逃避此問題，而最終沒出席驗身，失去了一次面對和處理問題的機會。故若計劃能及早安排檢查，才繼續問卷跟進更能吸引大部份短視的藥物濫用青少年參加。

BGCA Kwun Tong OUT REACHING Team 2 Mr Choi

對身體檢查方面十分滿意，若在期間設講座，訓練小組或營，相信效果更佳。而是次活動能給予案主關注到自己吸食藥物所帶來的影響，但戒掉的動力仍低。若有一群共同處境的青年一起參與小組/活動可更容易推動戒掉濫用藥物。

BGCA Kwun Tong OUT REACHING Team 2 Mr Chow

欣賞在驗身計劃內能提供多種測試，讓參加者醒覺到濫用藥物的多方面影響，而跟進轉介上能提供協助。

BGCA Sau Mau Ping IT Mr Wong

身體檢查結果初時對受助者是有正面影響，例如他會減少吸食次數或份量。可是當 fmg 頭流行，身體檢查結果效應減 x，更由於 fmg 頭效力持續 短暫，身體沒有明顯分別，於是在 disco 內安全地服用次數增加。Fmg 頭阻障人面對現實，積極尋找自我。

BGCA Kwun Tong OUT REACHING 1 Miss Tang

讓參加者對自己身體狀況有所了解，可讓工作人員與參加者討論濫用藥物對她健康影響，若能增加名額更好。

BGCA Kwun Tong OUT REACHING 1 Miss Yeung

服務非常全面，醫生在闡釋報告時，態度及手法均甚受年青人所接受：不強調他們要立即停用藥物，但告知他們實際個案(如腦萎縮圖片)，讓他們有所警惕，又不會此檢查是利誘他們戒毒。而透過檢查結果，亦有助我們日後對服務對象之跟進，亦有助我們日後對象之跟進，並讓其友輩引以為鑑。

Caritas Lok Heep Miss Lai

可藉此檢查，讓案主有多一些些對身體之警覺，雖然仍不肯用轉介信去看醫生，但亦表示會多保重身體。此外工作人員亦可藉問卷作面談之邀請。

Cheer Lutheran Center Miss Liu

在看 X 光片時個案能具體看到吸煙對其肺部的影響，感覺較強，另在物理治療檢查環節中，個案對如何能 keep fit 亦非常關注，並嘗試遵照治療師建議有所行動。問卷部份略長外，整體效果不俗。

APPENDIX 2: STUDENT QUESTIONNAIRE

檔案編號：_____

葵涌醫院藥物誤用評估中心 青少年生活、行爲及嗜好問卷調查

姓名：_____

日期：_____

請圈出你認為合適的答案

第一部分 吸煙用量及次數

1. 你是否曾經吸煙？
(1) 是 (2) 否 (1)
2. 在過去一個月內你會否吸煙？
(1) 有 (2) 沒有 (2)
3. 若有，在整個月內總共食了多少枝？ _____ 枝 (3)
4. 在過去一星期內你會否吸煙？
(1) 有 (2) 沒有 (4)
5. 若有，在整個星期內總共食了多少枝？ _____ 枝 (5)
6. 你昨天曾否吸煙？
(1) 有 (2) 沒有 (6)
7. 若有，昨天食了多少枝？ _____ 枝 (7)
8. 你平均吸煙次數有多頻密？
(1) 從不
(2) 一個月幾次
(3) 一星期幾次
(4) 每天
(5) 曾經吸煙但現已戒掉 (8)
9. 你有朋友吸煙嗎？
(1) 沒有
(2) 三數個
(3) 有一些
(4) 大部份
(5) 全部 (9)

10. 若你的父母知道你吸煙，他們會有何感覺？

- (1) 完全不介意
- (2) 有些生氣
- (3) 非常憤怒

第二部分 酒精用量及次數

1. 你是否曾經飲酒？

- (1) 是
- (2) 否

2. 在過去一年內你會否飲酒？

- (1) 有
- (2) 沒有

3. 在過去一個月內你會否飲酒？

- (1) 有
- (2) 沒有

4. 在過去一星期內你會否飲酒？

- (1) 有
- (2) 沒有

5. 你飲酒次數有多頻密？

- (1) 從不
- (2) 一年幾次
- (3) 一個月幾次
- (4) 一星期幾次
- (5) 每天

若你從不喝酒，請不用回答第六至九題；請跳去第十題。

6. 當你飲酒時，你通常會飲多少？

- (1) 一杯
- (2) 兩杯
- (3) 三至六杯
- (4) 六杯以上
- (5) 喝至興奮或醉了為止

7. 當你飲酒時，你通常會喝什麼？

- (1) 餐酒
- (2) 啤酒
- (3) 超過一種酒類，或混合酒類如雞尾酒
- (4) 烈酒
- (5) 不喝酒

8. 你經常飲醉嗎？

(1) 從未

(2) 一年有一兩次

(3) 一個月有一兩次

(4) 一星期有一兩次

(5) 一星期有幾次

(6) 幾乎每天

(18)□

9. 當你飲酒或飲醉時，以下之情況曾否發生在你身上？

有 沒有

a. 家庭糾紛

(1) (2)

(19)□

b. 打架

(1) (2)

(20)□

c. 遭遇意外或損傷

(1) (2)

(21)□

d. 學業問題

(1) (2)

(22)□

e. 惹事遭警方干涉

(1) (2)

(23)□

10. 你有朋友飲酒嗎？

(1) 沒有

(2) 三數個

(3) 有一些

(4) 大部份

(5) 全部

(24)□

11. 若你的父母知道你飲酒，他們會有何感覺

(1) 完全不介意

(2) 有些生氣

(3) 非常憤怒

(25)□

第三部分 濫用藥物的用量及次數

濫用藥物的定義：在沒有醫生指示下或違法使用藥物

1. 請指出你會濫用的藥物（可選多項）

a. 麻醉劑：海洛英(白粉，四仔)(1) 帆船仔(2) 嗎啡(3)

(26)□

b. 迷幻劑：大麻(草)(1) 迷幻藥(2)

(27)□

c. 興奮劑：冰(1) 安非他命(2) fing 頭丸 / 狂喜(3)

可卡因/Cocaine(4)

(28)□

d. 中樞神經鎮抑劑：丸仔(1) 安眠藥(2) 忽得(3)

綠豆仔(4)

安定(5)

十字架(6)

藍精靈(7)

- 白瓜子(8) 燕窩(9) (29)
- e. 其他： 咳藥水(1) O仔(2) K仔 / 茄(3) 天拿水 (4) (30)
- f. 請列出曾濫用而不包括在上列的藥物： _____ (31)

2. 請指出你在過去三個月內曾濫用的藥物 (可選多項)
- a. 麻醉劑： 海洛英(白粉，四仔)(1) 帆船仔(2) 嗎啡(3) (32)
- b. 迷幻劑： 大麻(草)(1) 迷幻藥(2) (33)
- c. 興奮劑： 冰(1) 安非他命(2) fing 頭丸 / 狂喜(3)
可卡因/Cocaine(4) (34)
- d. 中樞神經鎮抑劑： 丸仔(1) 安眠藥(2) 忽得(3)
綠豆仔(4) 安定(5) 十字架(6) 藍精靈(7)
白瓜子(8) 燕窩(9) (35)
- e. 其他： 咳藥水(1) O仔(2) K仔 / 茄(3) 天拿水 (4) (36)
- f. 請列出曾濫用而不包括在上列的藥物： _____ (37)
3. 在過去一個月內你會否濫用上述藥物？
(1) 有 (2) 沒有 (38)
4. 在過去一星期內你會否濫用上述藥物？
(1) 有 (2) 沒有 (39)
5. 你昨天曾否濫用上述藥物？
(1) 有 (2) 沒有 (40)
6. 你濫用藥物次數有多頻密？
(1) 從不
(2) 一年幾次
(3) 一個月幾次
(4) 一星期幾次
(5) 每天 (41)
7. 你的朋友有濫用藥物嗎？
(1) 沒有
(2) 三數個

- (3) 有一些
(4) 大部份
(5) 全部 (42)
8. 若你的父母知道你濫用藥物，他們會有何感覺？
(1) 完全不介意
(2) 有些生氣
(3) 非常憤怒 (43)

第四部份 你對吸煙和喝酒的看法

- | | 非常
不同意 | 不同意 | 中立 | 同意 | 非常
同意 | |
|-------------------|-----------|-----|-----|-----|----------|-------------------------------|
| 1. 公眾地方應該禁止吸煙 | (1) | (2) | (3) | (4) | (5) | (44) <input type="checkbox"/> |
| 2. 吸煙氣味很討厭 | (1) | (2) | (3) | (4) | (5) | (45) <input type="checkbox"/> |
| 3. 抽煙令你看來有型 | (1) | (2) | (3) | (4) | (5) | (46) <input type="checkbox"/> |
| 4. 若男孩抽煙，女孩們會喜歡他 | (1) | (2) | (3) | (4) | (5) | (47) <input type="checkbox"/> |
| 5. 若女孩抽煙，男孩們會喜歡她 | (1) | (2) | (3) | (4) | (5) | (48) <input type="checkbox"/> |
| 6. 抽煙的青少年有較多朋友 | (1) | (2) | (3) | (4) | (5) | (49) <input type="checkbox"/> |
| 7. 若青少年抽煙，代表他們剛強 | (1) | (2) | (3) | (4) | (5) | (50) <input type="checkbox"/> |
| 8. 吸煙帶給你許多歡樂 | (1) | (2) | (3) | (4) | (5) | (51) <input type="checkbox"/> |
| 9. 抽煙的青少年看來較愚蠢 | (1) | (2) | (3) | (4) | (5) | (52) <input type="checkbox"/> |
| 10. 抽煙的青少年較易感到憂慮 | (1) | (2) | (3) | (4) | (5) | (53) <input type="checkbox"/> |
| 11. 抽煙的青少年愛表現自己 | (1) | (2) | (3) | (4) | (5) | (54) <input type="checkbox"/> |
| 12. 抽煙的青少年比較成熟 | (1) | (2) | (3) | (4) | (5) | (55) <input type="checkbox"/> |
| 13. 若青少年喝酒，代表他們剛強 | (1) | (2) | (3) | (4) | (5) | (56) <input type="checkbox"/> |
| 14. 喝酒帶給你許多歡樂 | (1) | (2) | (3) | (4) | (5) | (57) <input type="checkbox"/> |
| 15. 喝酒的青少年有較多朋友 | (1) | (2) | (3) | (4) | (5) | (58) <input type="checkbox"/> |
| 16. 喝酒的青少年較易感到憂慮 | (1) | (2) | (3) | (4) | (5) | (59) <input type="checkbox"/> |
| 17. 若女孩飲酒，男孩們會喜歡她 | (1) | (2) | (3) | (4) | (5) | (60) <input type="checkbox"/> |
| 18. 若男孩飲酒，女孩們會喜歡他 | (1) | (2) | (3) | (4) | (5) | (61) <input type="checkbox"/> |
| 19. 飲酒令人行為愚蠢 | (1) | (2) | (3) | (4) | (5) | (62) <input type="checkbox"/> |
| 20. 飲酒令你看來有型 | (1) | (2) | (3) | (4) | (5) | (63) <input type="checkbox"/> |

21. 飲酒的青少年比較成熟 (1) (2) (3) (4) (5) (64)
22. 飲酒的青少年愛表現自己 (1) (2) (3) (4) (5) (65)

第五部分 你對濫用藥物的看法

- | | 非常
不同意 | 不同意 | 中立 | 同意 | 非常
同意 | |
|---------------------|-----------|-----|-----|-----|----------|------|
| 1. 濫用藥物並無不妥 | (1) | (2) | (3) | (4) | (5) | (66) |
| 2. 濫用藥物令你看來有型 | (1) | (2) | (3) | (4) | (5) | (67) |
| 3. 濫用藥物的青少年有較多朋友 | (1) | (2) | (3) | (4) | (5) | (68) |
| 4. 若男孩濫用藥物，女孩們會喜歡他 | (1) | (2) | (3) | (4) | (5) | (69) |
| 5. 青少年濫用藥物，這代表他們剛強 | (1) | (2) | (3) | (4) | (5) | (70) |
| 6. 濫用藥物帶給你許多歡樂 | (1) | (2) | (3) | (4) | (5) | (71) |
| 7. 濫用藥物的青少年看來很愚蠢 | (1) | (2) | (3) | (4) | (5) | (72) |
| 8. 濫用藥物的青少年較易感到憂慮不安 | (1) | (2) | (3) | (4) | (5) | (73) |
| 9. 濫用藥物的青少年比較成熟 | (1) | (2) | (3) | (4) | (5) | (74) |
| 10. 濫用藥物的青少年愛表現自己 | (1) | (2) | (3) | (4) | (5) | (75) |
| 11. 若女孩濫用藥物，男孩們會喜歡她 | (1) | (2) | (3) | (4) | (5) | (76) |

第六部分 自我形象

- | | 非常
不同意 | 不同意 | 中立 | 同意 | 非常
同意 | |
|------------|-----------|-----|-----|-----|----------|------|
| 1. 我通常覺得自己 | | | | | | |
| a. 聰明 | (1) | (2) | (3) | (4) | (5) | (77) |
| b. 好看 | (1) | (2) | (3) | (4) | (5) | (78) |
| c. 得人喜愛 | (1) | (2) | (3) | (4) | (5) | (79) |
| d. 運動出色 | (1) | (2) | (3) | (4) | (5) | (80) |
| e. 滿意自己 | (1) | (2) | (3) | (4) | (5) | (81) |
| f. 受歡迎 | (1) | (2) | (3) | (4) | (5) | (82) |
| g. 友善 | (1) | (2) | (3) | (4) | (5) | (83) |

- | | | | | | | | |
|-----------------------------|-----------|-----|-----|-----|----------|-------|--------------------------|
| h. 值得信任／誠實 | (1) | (2) | (3) | (4) | (5) | (84) | <input type="checkbox"/> |
| i. 容易相處 | (1) | (2) | (3) | (4) | (5) | (85) | <input type="checkbox"/> |
| j. 好人 | (1) | (2) | (3) | (4) | (5) | (86) | <input type="checkbox"/> |
| 2. 我想做的事，我幾乎全都做得到 | (1) | (2) | (3) | (4) | (5) | (87) | <input type="checkbox"/> |
| 3. 我做事通常比別人好 | (1) | (2) | (3) | (4) | (5) | (88) | <input type="checkbox"/> |
| 4. 我可以應付困難的事情 | (1) | (2) | (3) | (4) | (5) | (89) | <input type="checkbox"/> |
| 5. 我對自己很滿意 | (1) | (2) | (3) | (4) | (5) | (90) | <input type="checkbox"/> |
| 6. 我是一個快樂的人 | (1) | (2) | (3) | (4) | (5) | (91) | <input type="checkbox"/> |
| 7. 我希望我可與現在不同 | (1) | (2) | (3) | (4) | (5) | (92) | <input type="checkbox"/> |
| 8. 我一人做事比與人合作更好 | (1) | (2) | (3) | (4) | (5) | (93) | <input type="checkbox"/> |
| 9. 我需要別人告訴我該怎樣做事 | (1) | (2) | (3) | (4) | (5) | (94) | <input type="checkbox"/> |
| 10. 我很容易受其他朋友影響 | (1) | (2) | (3) | (4) | (5) | (95) | <input type="checkbox"/> |
| 11. 我能夠自己作決定 | (1) | (2) | (3) | (4) | (5) | (96) | <input type="checkbox"/> |
| 12. 我通常吩咐朋友做我想做的事 | (1) | (2) | (3) | (4) | (5) | (97) | <input type="checkbox"/> |
| | 非常
不同意 | 不同意 | 中立 | 同意 | 非常
同意 | | |
| 13. 若我的朋友想我吸煙，我會照做 | (1) | (2) | (3) | (4) | (5) | (98) | <input type="checkbox"/> |
| 14. 若有朋友給我香煙，我會吸煙 | (1) | (2) | (3) | (4) | (5) | (99) | <input type="checkbox"/> |
| 15. 看到關於吸煙的雜誌廣告及海報令我
想食煙 | (1) | (2) | (3) | (4) | (5) | (100) | <input type="checkbox"/> |
| 16. 當我遇到新朋友，我通常會感到憂慮 | (1) | (2) | (3) | (4) | (5) | (101) | <input type="checkbox"/> |
| 17. 在社交場合我通常覺得自信和輕鬆 | (1) | (2) | (3) | (4) | (5) | (102) | <input type="checkbox"/> |
| 18. 我覺得自己容易 | | | | | | | |
| a. 向異性介紹自己 | (1) | (2) | (3) | (4) | (5) | (103) | <input type="checkbox"/> |
| b. 與新朋友閒談 | (1) | (2) | (3) | (4) | (5) | (104) | <input type="checkbox"/> |
| c. 稱讚別人 | (1) | (2) | (3) | (4) | (5) | (105) | <input type="checkbox"/> |
| d. 接受別人的稱讚 | (1) | (2) | (3) | (4) | (5) | (106) | <input type="checkbox"/> |
| e. 表達自己感受 | (1) | (2) | (3) | (4) | (5) | (107) | <input type="checkbox"/> |
| f. 向人提出約會 | (1) | (2) | (3) | (4) | (5) | (108) | <input type="checkbox"/> |
| g. 主動與陌生人談話 | (1) | (2) | (3) | (4) | (5) | (109) | <input type="checkbox"/> |
| 19. 當我作重要決定時，我通常受以下影響 | | | | | | | |
| a. 朋友 | (1) | (2) | (3) | (4) | (5) | (110) | <input type="checkbox"/> |
| b. 家人 | (1) | (2) | (3) | (4) | (5) | (111) | <input type="checkbox"/> |
| c. 老師 | (1) | (2) | (3) | (4) | (5) | (112) | <input type="checkbox"/> |

d. 報紙，雜誌，書籍	(1)	(2)	(3)	(4)	(5)	(113)
e. 電視，收音機，電影	(1)	(2)	(3)	(4)	(5)	(114)

APPENDIX 3: A REVIEW ON THE STRENGTHS AND WEAKNESSES OF VARIOUS EXISTING METHODS OF PERSUADING DRUG ABUSERS.

INTRODUCTION:

Only a small proportion (10 to 20 %) of drug users seek help and receive treatments [1] [2] [3] [4] [5] [6]. When they seek help, it is usually late and they are already experiencing many physical, psychological and social complications [7] [8] [9] [10]. It is important to examine various existing methods of persuading drug abusers, and to make reference to the local scene in Hong Kong.

DIFFERENT WAYS OF PERSUADING SUBSTANCE ABUSERS: COERCION:

The conventional view regards law interdiction and criminal penalties as negative and counter-therapeutic, and assumes better outcome among clients with an inner motive to change [11]. Recent literature findings do not support this. There are evidences that coerced and voluntary clients may have similar outcome, and actually coerced clients tend to have better attendance and compliance during treatment [12][13]. The potential use of coercion to promote treatment participation and behavioural changes may have been underestimated. In this regard, coercion should continue to remain as a persuading force against substance abuse. A balanced and smooth integration between the legal system and intervention services may create the best changes to maximize outcome [14][15]. It has been shown that policy change in conjunction with other intervention modalities produce significant effects on youth drug abuse [16] [17]. This is an area that deserves more consideration and development. The Drug Court is a new development in some countries for swift and consistent decisions on treatment and rehabilitation for drug offenders [18]. Another variable to consider in designing drug policy and resources allocation is the nature of the substances to be controlled. For non-opiate drugs like solvents, cough mixtures and others, it is unrealistic to adopt a zero-tolerance stance. Vigorous prohibition, in terms of human and operational resources, is costly and it does not guarantee success [19]. In tackling abuse of these drugs, focusing on deterrence would raise the cost of the control policy far more than would a more balanced approach that invest more in treatment and early intervention of adverse health consequences. It is the role of the Government to ensure a balanced policy for optimal strategies in response to the changing drug scene. At the moment, early intervention especially for non-opiate abuse, is a gap in service provision.

INFORMAL SOCIAL NETWORK:

The social networks are important channels of promoting help-seeking and behaviour change. Literature reveals that receipts of treatment were typically preceded by influence or pressure from their family or friends [20] [21][22]. Benson found that adolescents were most likely to express willingness to seek help for a drug problem from an adult friend and then a parent than to staff of health care settings [23]. It follows that there is a need to expand the involvement of various social networks to facilitate appropriate help-seeking among substance users. The major settings for counteracting drug use include the family and the school environments.

Family based programmes:

Family factors are recognized to be involved in the genesis and maintenance of drug abuse. Thus, family members are valuable change agents. Family-based programmes aim to reverse the family risk factors or to enhance the protective factors against drug abuse. There are relatively fewer programmes focused primarily or solely on families, though there are some evidences that it is effective [24] [25] [26] [27]. The favourable outcomes of a typical programme include reductions in family conflict, improvement in family communication, reduction in youth conduct problems, aggressiveness and substance use [28]. As an element in other multi-component programmes, it was found that participated parents had more involvement in school policy, better drug prevention skills and had less drug abuse themselves [29].

School based programmes:

This is one of the most widely researched approaches with large amount of literature available. However, the emphasis is skewed towards homogenous programmes for primary prevention, and relatively few focus on those at risk or active users. There is a need for the development of differential programmes, more intensive in nature, targeting at students with active drug use and higher level of psychosocial problems. The various approaches are reviewed here.

Information dissemination approach:

This is the earliest approach assuming that drug abuse is due to ignorance. The aim is to increase knowledge of illicit drugs and their harmful effects. Literature indicates that such approach is not effective [30] [31] [32]. Although students' knowledge of drug hazards could be increased, change in attitude had not been a constant finding [33] [34]. Some studies even demonstrated an increase in experimentation of drugs after exposed to such programmes [35] [36] [37] [38] [39]. Since complications take time to develop, and there are individual variations for the onset of health problems,

the general information presented may be inconsistent with their experience with drugs. Furthermore, from a developmental perspective, adolescents are in a stage of formal operational thinking process, and they respond critically to inconsistencies between what they are told and what they see among their peers. However, this does not mean that there is no value in giving accurate information to students on harmful effects of drugs; just that information dissemination alone is not sufficient to bring about behavioural change.

Fear arousal:

"Scare tactics" have been employed to provoke anxiety. The assumption being that if one can make people afraid about the consequences of drug abuse, then they will not take drugs. However, overemphasis or exaggeration of the negative consequences of drug consumption usually makes the information less trustworthy to the target population [40]. Research showed that knowledge retention was better in a low fear instead of high fear appeal [41]. Furthermore, the propagated dangers of drugs had in some cases made them even more attractive for experimentation. Worse still, the loss of credibility may lead to hurdle at later Counselling services. Scare tactics had not been shown to produce enduring changes in health practices [42].

Affective Education:

Activities are designed to promote affective development. This approach focuses on improvement of self-concept, interpersonal relationships and decision-making process through experiential classroom activities. Studies testing the effectiveness of this approach had been discouraging [43] [44]. The goals of these programmes were worthy, but they might be too far removed from the goal of reduced drug abuse [24].

Alternative Programmes:

This approach is to promote hobbies, sports and community services in order to reduce the likelihood of drug abuse. The philosophy is to provide real-life experience that would be as appealing as substance use, and to reduce the risk factors for drug abuse including aggression, lack of self-discipline and lack of peer attachment. According to the literature, while some activities (e.g. academic activities, participation in sports and religious activities) decreased substance abuse, others (e.g. entertainment activities, vocational and some social activities) increased it [45]. There are some evidences that such approach may be effective for those with risk factors for drug abuse [46]. However, the activities that may be most appropriate alternatives are likely to be least attractive for vulnerable or active drug users. Overall, alternative approaches have shown little effectiveness in reducing drug use if they are the only

means of intervention [47] [48].

Psychosocial Approaches:

The origins of this approach can be traced back to work carried out in the 1970s in relation to social and psychological factors affecting drug abuse by Evans, Bandura and others.

Social resistance skills training focuses on teaching specific skills to resist negative social influence to engage in substance use. The processes involve increasing awareness of social influence to drug use, increasing knowledge of immediate negative consequences, and establishment of non-use norms. Another important feature is the use of peer leaders as program provider. Effectiveness has been documented in some studies [49] [50] [51] [52] [53] [54] [55]. Although it is not the scope of this review to go into specific programmes, the Drug Abuse Resistance Education (DARE) should be briefly mentioned here. It is perhaps the best-known application of social resistance skills training and is widely used in the schools in America. Meta-analysis of studies evaluating the DARE programme shows that it is not effective [56] [57]. The value of this programme has been questioned especially on its long-term effectiveness, but some argued that it is more an implementation problem rather than a problem of the approach [58] [59].

Personal and social skills training takes a broader stance and teaches generic personal and social skills instead of skills with a problem-specific focus. These include problem solving, decision-making, assertive skills, general social skills, cognitive skills to resist interpersonal or media influences, as well as anxiety coping strategies. They are based on social learning theory [60] [61] and problem behaviour theory [62], and there is an emphasis on the use of proven cognitive behavioural methods. One well-known example is the Life Skills Training program [63] [64]. Evaluation studies demonstrated significant reduction in drug use including smoking [65] [66] [67], alcohol [63] [68] [69] [70] [71] [72] and marijuana [73] [74]. Longer-term follow up studies also demonstrated good outcome [75] [76].

MASS MEDIA:

Mass media is no doubt a powerful way to reach and to influence people. Media campaigns are commonly used to combat drug abuse. Overall, the effects of mass media programmes have been limited to attitude change and intentions to use [77] [78], but the actual behaviour change in drug use had not been well established. It is

generally agreed that the media plays an important role in promoting broad community-wide programmes, including raising awareness, promoting participation and reinforcing messages [79]. In other words, media campaigns have greater impact if integrated into broader anti-drug programmes. Against drug abuse policy advocacy campaigns have also been shown to be effective on substance use [80]. A newer approach is to use more sophisticated and targeted approaches. Based on principles of social marketing, the audience are segmented and the messages will be tailored according to the target populations in ways like selling a commercial product. The results achieved are more impressive [81].

HEALTH CARE SERVICES:

Conventional treatment services:

Conventional treatments are more catered for those with higher physical dependence and health problems. Interventions are more intensive and comprehensive. No doubt such provision will continue to play an important role in the continuum of care. However, on the aspect of persuading substance abusers, its position is passive with a high treatment threshold. Clients have to pass through gatekeepers before getting service. They, though highly visible with more severe addiction problems, are only a small proportion (<10%) of the whole substance abuse population [82]. There is a much larger proportion with circumscribed drug use problems that are not attracted to traditional treatments.

Early intervention options (new services):

In the field of addiction, there is a new trend of broadening the base of treatment [83] to attract more substance-abusing individuals into helping environment. Treatments are less intense, employing time-limited, problem-specific, low stigma approaches to promote reduction of substance use. The aim is not to replace traditional services but to complement them. Benefits of this lower threshold approach include early case finding, early treatment and wider application to non-opiate drugs. There are several mainstays of interventions to be mentioned here, including motivational interviewing [84], relapse prevention [85], and guided self-change [86]. These innovations hold promise to provide for the underserved mild to moderately substance users, and to help unmotivated or poorly engaged clients with heavy addiction and complications.

Harm reduction:

Harm reduction moves away from the moral idealism of total abstinence to address

how to reduce the harmful effects of drug abuse (including the risk of HIV infection). It was found that one of the primary factor motivating people to seek treatment is their experience of negative consequences of drug use [87]. Thus, harm reduction can attract more drug abusers into treatment. Examples include the methadone clinic, methadone by bus [88] and the needle exchange programme [89]. Harm reduction approach has been criticized for its permission or "encouragement" of continual drug abuse. However, there are evidences that such intervention may serve as a precursor to treatment entry [90] [91]. Another merit is that it reduces the barrier to treatment entry, and brings Counselling and preventive measures to otherwise unreached clients. There has always been a controversy that how far such approach can be taken to.

STRENGTHS AND WEAKNESSES OF VARIOUS WAYS OF PERSUADING SUBSTANCE ABUSERS:

The strengths and weakness are tabulated as follow:

	Strength	Weakness
Coercion and law enforcement	<ul style="list-style-type: none"> ● Important mechanism to keep the society in order ● Required to protect the interest of citizens ● Effectiveness and contribution to promotion of treatment participation and behavioural change underestimated 	<ul style="list-style-type: none"> ● Unable to eliminate drug problem on this approach alone ● May paradoxically increase drug related crime rate ● Increase the risk of health hazards including HIV infection ● Stigmatization of drug use and abuse, extending to drug abuse treatment settings (since help offered by mainstream institutes carries risks of legal action, fines and aversive social controls)
Informal social network	<ul style="list-style-type: none"> ● Operate by enhancing protective factors and reversing risk factors for substance abuse ● Facilitate the natural forces that promote 	<ul style="list-style-type: none"> ● Majority of existing programmes aim at primary prevention, assuming a homogenous, "one size fit all" approach ● Inadequate selective or

	<ul style="list-style-type: none"> ● behaviour change ● Make greater use of social and community resources ● Less social stigma 	<ul style="list-style-type: none"> ● indicated programmes suited for those at risk or active users ● Integration with existing service provision needs further enhancement
Mass Media	<ul style="list-style-type: none"> ● Can reach and influence a large population ● Has great impact if integrated into broader anti-drug programmes ● Has been shown to be effective when combined with policy or regulatory approaches 	<ul style="list-style-type: none"> ● Effects limits to attitude ● Direct effect on behaviour (reduction in drug use) not established ● Effects may not be lasting
Traditional intervention	<ul style="list-style-type: none"> ● Intensive, multi-sessions ● Conducted by trained professionals ● More thoroughly researched ● Suitable for those with severe addition and complications 	<ul style="list-style-type: none"> ● Not suitable for the less severe ● Involve acceptance of a label (addict) ● More passive and "high threshold" approach ● Wait for clients to present for service, after passed through various gatekeepers ● Less involved in enhance the help-seeking process or to bring service to those in need ● Costly ● Disruptive to clients, rendering them unable to fulfill family and social responsibilities
Early intervention approach	<ul style="list-style-type: none"> ● Low-threshold intervention ● Time-limited, less intensive, problem-specific ● Can attract more substance abusers into helping environments ● More accessible, reduce 	<ul style="list-style-type: none"> ● May not be intensive enough to bring about behavioural change for more severe clients ● Relatively fewer literature on outcome and effectiveness ● Do not teach cognitive or behavioural skills ● Do not intend to change the clients' social environment

	stigma and less barriers to help-seeking <ul style="list-style-type: none"> ● Suitable for the underserved majority with mild to moderate problems ● May serve as gateway to other modality of treatment ● Cost-effective 	
Harm reduction	<ul style="list-style-type: none"> ● Decrease crime rates and health complications ● Does not deny people who decide to engage in drug use ● Prospective help seekers more likely to come out and seek assistance ● May serve as precursor to treatment entry 	<ul style="list-style-type: none"> ● Controversial ethical issue ● Permit continual drug use ● Desensitize and "encourage" drug abuse ● Not sure how far this can be taken to (e.g. shooting gallery, prescription of heroin etc.)

POINTS RELEVANT TO THE HONG KONG SCENE:

1. With the change in drug use pattern in Hong Kong, psychoactive drugs users may not be appealed to traditional services. The literature revealed that most adolescents, including very heavy drug users, did not consider themselves to have a drug problem [92]. Many of them will not seek help until late in their development of complications. There is a lack of early intervention service provision in Hong Kong. The Free Body Check-Up programme is just one example of such provision, and there can be many other innovative applications of this approach. For further development in this new mode of service to achieve a more optimal continuum of care, priority should be given and resources should be committed accordingly.
2. Methadone Clinic in Hong Kong is well known for its efficiency. However, its Counselling element is less well developed. As already discussed, one important aim of harm reduction is to provide Counselling and preventive education. Such

aspect is in need for further enhancement in Hong Kong. With the increasing trend of abuse of multiple substances (a person abusing many substances at the same time), closer cooperation with the substance abuse clinics under the Hospital Authority should be worked out.

3. In Hong Kong, women are still under-represented in help-seeking samples. Their special needs should be further explored and addressed. There is a need to increase the scope and appeal of services to them.
4. Specific Counselling approaches including motivational interviewing and relapse prevention are more appropriate for assisting the help-seeking process, and for persuading substance abusers who avoid conventional treatments. More training provision in this area is desirable.

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