A Comparison of Drug Addiction Treatment Programmes

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Comparative Study of Treatment Programmes for Drug Abusers and Follow up of Programme Graduates in Hong Kong

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Prepared by

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MULTI-MODALITY TREATMENT IN HONG KONG

The Hong Kong Government has long adopted a multi-modality approach to drug abuse treatment. Treatment programmes in Hong Kong can essentially be classified into four main types: the compulsory placement programme run by the Correctional Services Department, the out-patient methadone treatment programme run by the Department of Health, the voluntary in-patient treatment/residential rehabilitation programmes run by the Society for the Aid and Rehabilitation of Drug Abusers (SARDA) and other non-governmental organisations, the substance abuse clinics run by the Hospital Authority.

In this study, the following eleven treatment programmes grouped in seven modalities have been examined:

1. CSD -- the compulsory placement programme, run by the Correctional Services Department;
2. MTP -- the out-patient methadone treatment programme, run by the Department of Health;
3. SARDA -- a voluntary in-patient treatment/residential drug rehabilitation programme run, by SARDA;
4. SARDA-AT -- a voluntary in-patient treatment/residential drug rehabilitation programme with early integration components, run by SARDA's Au Tau Youth Centre;
5. ODB -- three voluntary in-patient treatment/residential drug rehabilitation programmes, respectively run by three religious bodies, namely the Operation Dawn, the DACARS Limited and the Barnabas Charitable Service Association Limited;
6. SER -- a voluntary in-patient treatment/residential drug rehabilitation programme, run by the Saber Entender Realizar Foundation for Humanitarian Aid; and
7. SAC -- three substance abuse clinics in Prince of Wales Hospital (PWH), Castle Peak Hospital (CP) and Kwai Chung Hospital (KC), all run by the Hospital Authority.

OBJECTIVES OF THE STUDY

Not well understood are the similarities and differences between various modalities of treatment for drug abusers. As different programmes have their diverse goals, it is not meaningful to gauge the effectiveness of a programme in terms of a single outcome such as detoxification. The primary objective of this study is to compare these different modalities of treatment for drug abusers in terms of the following:

1. the programme's stated objectives and its modus operandi;
2. the current and expected client characteristics;
3. the programme's performance measured in terms of a number of commonly selected indicators; and
4. risk factors contributing to relapse in different treatment programmes.

Through this study, it is hoped to provide policy-makers and service providers with a deeper understanding of the operation of these programmes. It should also help to identify areas where the performance of a modality/programme can be improved so that the effectiveness of the programme can be enhanced.

OVERVIEW OF THE STUDY

As such, the whole study comprised four consecutive phases outlined below with some overlapping in the respective time frames.

1. Phase One represented the operational analysis of different treatment programmes, with in-depth interviews and reviews of programme publications being conducted to obtain relevant information.
2. Phase Two collected clients' characteristics and their reasons of admission to treatment programmes through a face-to-face survey of clients from the treatment programmes.
3. Phase Three developed a set of performance indicators (output and outcome) for joint application which may lead to a common basis of performance pledge in Hong Kong. Data for 1998 were collected from the treatment programmes through a mail survey, so as to evaluate the feasibility of the proposed indicators and to set a baseline for future comparisons of performance.
4. Phase Four identified the risk factors contributing to relapse in different types of treatment programmes so that more effective intervention strategies can be developed. To obtain the necessary data, a prospective longitudinal study with a series of face-to-face follow-up surveys, a retrospective face-to-face survey and two focus group discussions were conducted during the planned phase and a supplementary phase.

These four inter-lapping phases of the project were designed to complement each other. Results of the four phases of study and the conclusions and possible implications that could be drawn from these findings are reported in the following sections.

SUMMARY RESULTS OF THE STUDY

Natural evolution of treatment for drug addiction in Hong Kong has resulted in seven different modalities of programmes. They were classifiable according to their criteria of admission and programme contents. A four-year, four-phase study was performed to describe and compare the seven modalities with a view to understand the programmes as they actually operated.

Phase One described the modus operandi of the seven modalities. The results in simplified forms are summarised in Table 0.1.

Table 0.1

ORGANIZATIONS	CSD	MTP	SARDA	SARDA-AT	SAC	SER	OD/DACARS/ Barnabas
ADMISSION CRITERIA	Court Sentencing	Voluntary	Voluntary, pre-counselling	Voluntary, pre-counselling	Voluntary	Voluntary	Voluntary, Religious practices
WAITING TIME	Nil	Nil	1st timer, 1wk. Repeaters, ≤12wk		Nil	Nil	Varied
DETOXIFICATION	Offered	Offered	Substitutional Withdrawal	Offered	Offered	Nil	Nil
TREATMENT MODE	Mandatory, residential, disciplinary, work	Outpatient, methadone maintenance	Voluntary, residential, work	Voluntary, residential, work therapy, group therapy	In-patient and out-patient care and treatment	Voluntary, residential, & role modelling	Voluntary, residential & religious faith
COUNSELLING	Social workers	Voluntary, by SARDA	Regular, by ex-addicts	Social workers	Social workers	By residential staff	Social workers or residential staff
REHABILITATION	12-month supervision, half-way house	Nil	Half-way houses, volunteer groups	After care by social workers	After care given to those who have referring agency	No after care service or half-way house service	-
READMISSION	No limitation	No limitation	Lower priority	Lower priority	No definite criteria, subject to agreement between carers and clients	No limitation	No limitation
TRANSFER	None	Arranged	On request	On request	Arranged	On request	On request
ADMISSION 1995	2533	7002	2114	-	50	13	-
FUNDING	Public	Public	Government, charity	Government, charity	Government	CSSA as fees, donations	Government, CSSA as fees, donations

CSD=Correctional Services Department, MTP=Methadone Treatment Programme, SARDA=Society for the Aid and Rehabilitation of Drug Abusers, SER=SER foundation for Humanitarian Aid, SAC=Substance Abuse Clinic (Prince of Wales Hospital (PWH), Castle Peak Hospital (CP), Kwai Chung Hospital (KC)), OD=Operation Dawn, DACARS=DACARS Ltd, Barnabas=Barnabas Charitable Service Association, SARDA-AT=SARDA Au Tau Youth Centre.

Phase Two described clients characteristics for each modality of treatment. The simplified results are summarised in Table 0.2.

Table 0.2

ORGANIZATIONS *	CSD	SARDA	MTP	SAC(PWH)	SER
Age, mean ± SD	24.6 ± 8.3	32.8 ± 12.0	29.5 ± 12.2	33.1 ± 12.7	23.7 ± 8.6
% living with family	89.2	86.4	74.6	100.0	94.7
% in public housing	72.3	76.8	60.9	44.4	64.7
% educated to $S_1 - S_3$	63.2	45.8	55.8	30.0 ($\geq S_4$, 40.0)	63.2
% monthly income $5001 - $10,000	40.9	50.8	42.0	20.0	42.1
% household monthly income ≥ $15,001	68.7	66.1	51.5	50.0	47.4
Mean no. of past treatment	1.9	4.4	3.0	1.1	2.9
Mean source of referral (%)	Court (100%)	Self (69.5%)	Self (92.0%)	Transfer (50.0%)	Self (42.1%)
% abusing heroin	85.8	98.3	97.8	40.0	94.7
% abusing 1 drug	63.9	32.2	65.2	80.0	31.6
% w/experience of overdose	26.7	44.1	26.8	20.0	26.3
Amount on drugs daily	$331	$350	$301	$195	$330
% having committed criminal offences before	77.2	49.2	38.4	20.0	89.5
% financing drugs by lawful income	66.3	71.2	68.8	63.2	80.0
% Main income by illegal means	21.0	5.1	5.8	10.0	10.5
% employed	88.6	89.7	67.4	70.0	63.2
% having chronic medical problems	12.1	13.6	18.1	10.0	10.5
Main reasons for quitting drugs	Family	Family	Job	Job	Job

* SAC(CP)(KC), OD, DACARS, Barnabas and SARDA-AT did not participate in Phase Two Study.

N.B. The percentages given in the Table are not proportionally weighted. The reader is referred to the details in the text for more accurate representation.

Phase Three attempted to develop indicators of output and outcome for the seven modalities, so that results of different programmes might be compared in future. The figures were extracted largely from the records kept by the agencies. (CSD claimed prospective collection.) The results are summarised in Table 0.3.

Table 0.3

ORGANIZATIONS *	CSD	MTP	SARDA	SER	OD/DACARS/ Barnabas**	SAC(CP) (KC)
1. No. of applicants	5075	9407	2544	89	370	291
2. No. of Admission	1776	9407	2183	40	173	184/27***
3. % of admitted cases (%)	35	100	85.8	44.9	46.8	38.1
4. Average No. of beds occupied	957.5	6661	272.4	26.5	25.6	6.705
5. No. of drop-out	0	Not Applicable.	915	30	43	22
6. No. of clients graduated in 1997	2096	992#	1044	9	29**	148
7. No. of graduates maintained drug abstinence for 1 year after graduation	1623	749#	375	2	24**	29^
8. % of graduates maintained drug abstinence for 1 year after graduation	77.4	75.5#	35.9	22.2	82.8**	26.1^
9. No. of graduates with no conviction for 1 year	1479	790#	571	2	29**	27^
10. % of graduates with no conviction for 1 year	70.6	79.6#	54.7	22.2	100**	24.3^
11. No. of graduates lost contact in one year after graduation	130	279#	263	5	4**	20^
12. % of graduates lost contact in one year after graduation	6.2	28.1#	25.2	55.6	13.8**	18.0^
13. No. of graduates engaging in productive activity for at least 6 months during the year after graduation	1819	673#	785	4	26**	22^
14. % of graduates engaging in productive activity for at least 6 months during the year after graduation	86.8	67.8#	75.2	44.4	89.7**	19.8^
15. Cost Performance Indicators ##						
- Daily cost per graduate	241.1	49.3#	117.8	682.4	247.4**	N.A.
- Daily cost per graduate for abstinence from drugs for 1 year after graduation	312.3	65.8#	334.3	3070.6	298.9**	N.A.
- Daily cost per graduate for non-conviction for 1 year after graduation	342.5	63.0#	219.2	3070.6	247.4**	N.A.
- Daily cost per graduate for employment for 6 months or more in one year after graduation	279.5	74.0#	158.9	1535.3	275.9**	N.A.

* SAC(PWH) and SARDA-AT did not participate in Phase Three Study.

** For item 6 – 15 in OD/DACARS/Barnabas, only Barnabas' data are presented.

*** 184 was the no. of residential patients and 27 was the no. of outpatients.

\# Items 6-15 for MTP were compiled for MTP patients followed up by SARDA caseworkers only. These indicators were not representative of the whole MTP patient population in 1998.

The different data collection methods used by different treatment agencies, as well as difficulties for some treatment agencies to separate its treatment-related expenses from non-treatment expenses, complicate the interpretation of the performance and cost indicators. In particular, users of these indicators should bear in mind that:

a. Comparison is meaningless and can be misleading when like is not compared with like. In the case of the CSD, given that DATC programme is an alternative to imprisonment for drug addicts convicted of criminal offences, a comparison of programme cost between DATC and voluntary treatment may require caution as a significant proportion of the expenditure of the former inevitably goes to keeping the convicts in secure and safe custody. While the cost of enforcing a closed regime could be seen as drug treatment cost if one accepts the view that the compulsory nature of DATC is likely to have an impact on the treatment come, one should also consider that the level of security and supervision imposed might have been less rigid -- and the programme cost lower, if the CSD just aims to confine the addicts to a drug free environment that facilitates detoxification. Given that CSD clients are convicted offenders committed to legal custody by court orders, appropriate security measures must be enforced to keep them in custody. Also, it is the CSD's duty to care -- an obligation to ensure their personal safety around the clock while in custody. Both incur additional expenses which cannot be dispense if law and order is to be enforced.

b. The proposed cost indicators line the recurrent expenditure up with the successful cases only. Owing to the compulsory nature of the CSD's DATC programme, inmates cannot leave the programme at any time of their own accord. Quite a number of them do not have the least motivation to quit the drug habit and are likely to be failure cases after graduation. Nevertheless, money is still spent on them throughout their stay in DATCs for serving their sentences. Those failure cases who have relapsed to drug/crime or failed to engage themselves in gainful employment without reasonable excuse after discharge will be recalled back to DATCs. Also, the CSD's aftercare officers are required to make every effort to locate the lost contact cases. These mandatory duties in processing the failure cases and lost contact cases add costs to the DATC programme.

c. In regard of capturing drug relapse and reconviction data, the CSD's method is different from that of the other treatment agencies. Information on the drug relapse status and reconviction status of CSD's clients are based on mandatory drug test and police data respectively, whereas that of voluntary agency clients is mainly based on self-reports. The problem of lost contact cases from the voluntary agencies may complicate the issue further as the reported numbers of graduates pertaining to drug abstinence, non-reconviction and stable employment most probably underestimate the true figures.

^ For items 7-14, only SAC(KC) data are presented. Data on outcome performance of SAC(CP) are not available.

N.A. Cost performance indicators of SACs could not be compiled because cost data were not available from the SACs.

Phase Four compared abstinence rates of graduates after staying drug-free for three months. The effect on relapse rates caused by different client characteristics on admission and by different changes in the clients' value systems during treatment were studied prospectively between different modalities.

601 subjects were recruited from 11 agencies, which included all 7 modalities, of treatment. They were followed for three (one agency), six (10 agencies) or twelve months (three agencies). The actual workings of the modalities were unmodified by the study. The self reported abstinence rates at 180 days from first follow up were approximately 50% for Correctional Services Department (CSD) and the Society for the Aid and Rehabilitation of Drug Abusers (SARDA), about 10% for the Methadone Treatment Programme (MTP), and 75% or higher for the Saber Entender Realizar Foundation for Humanitarian Aid (SER), the three religious bodies of Operation Dawn, DACARS Ltd and Barnabas (ODB), the combined Substance Abuse Clinics of Castle Peak, Kwai Chung and Prince of Wales Hospitals (SAC), and the SARDA Youth Centre at Au Tau (SARDA-AT). The difference in abstinence rates among the three broad groups were statistically significant (Wilcoxon-Gehan statistic, $p=0.0000$ to 0.0402).

The socio-demographic characteristics that were found to be associated with higher subsequent abstinence rates were: age <= 21 years, being married, being employed, absolute abstinence as the goal of treatment, shorter period of addiction, greater variety and frequency of service received, higher satisfaction with the treatment programme, higher perceived family support, higher self-confidence in resisting drugs under unpleasant emotions or physical discomfort or in conflict with others or under social pressure to use drugs or having a pleasant time with friends (Wilcoxon-Gehan static, $p<0.05$). No single parameter ran true for more than 3 modalities. For ODB and SARDA-AT, the relapse rates were so low and the group sizes so small that no socio-demographic parameter was shown to affect the subsequent abstinence rates.

With addition of a mini-survey carried out on 60 partially stratified subjects from CSD, SARDA and MTP, plus 20 relapsed cases randomly selected from SARDA for assessing the impact of previous treatment, together with prospective data from SER, ODB, SAC and SARDA-AT, a total of 188 subjects provided data on their priorities in life (value system) in the pre- and post-treatment periods. Changes during treatment were found in the priority given to the use of drugs, family, health, friends, career, academic future, security, clothing, God, stimulation/adventure, peer status, tobacco/alcohol, wealth, face/reputation, power, future and material enjoyment. A favourable change in these was found in a median (range) of 5 (2-12) priorities. Favourable changes were statistically associated with a lower 6-month relapse rate (Mann-Whitney U, $p=0.00$ to 0.041). For the last five priorities, a change, whether becoming more or less important, was associated with a lower 6-month relapse rate.

In-depth qualitative interviews were carried out on a focused group of 4 male and 3 female treated addicts who were selected for having multiple episodes of treatment from multiple modalities. They had a median (range) addiction period of 14 (1-31) years, and a median (range) of 5 (2-24) attempts of treatment in the past. The following consensus was expressed: the determinant of success in weaning drugs was 70% psychological. Success appeared to hinge on a change in the value systems

towards the goals in life. Relapse was a life-long possibility, depending on choices and circumstances throughout life. No particularly potent trigger could be singled out. The factors they found helpful in staying off drugs were friends, family support, employment, and a structured life style. On the programme contents, they were generally agreed that self-realisation was of top importance especially when exemplified by treated addicts, that reassurance and assistance were helpful, and that half-way houses and employment opportunities were desired. Discipline would help if it was neither lax nor excessive. Substitutional therapy during detoxification was controversial, but all found the final step in weaning methadone to be an almost impossible barrier to surmount by oneself.

Like many other social science investigation, the study has imperfections. Among these are the use of convenient sampling, lack of full randomization and unanticipated modification of the protocol. Remedial work has been carried out in the supplementary phase to address some of these issues. We believe there is merit in the internal comparisons in the data collected, although care needs to be taken in projecting our findings from this sample to the total population of drug addicts in Hong Kong.

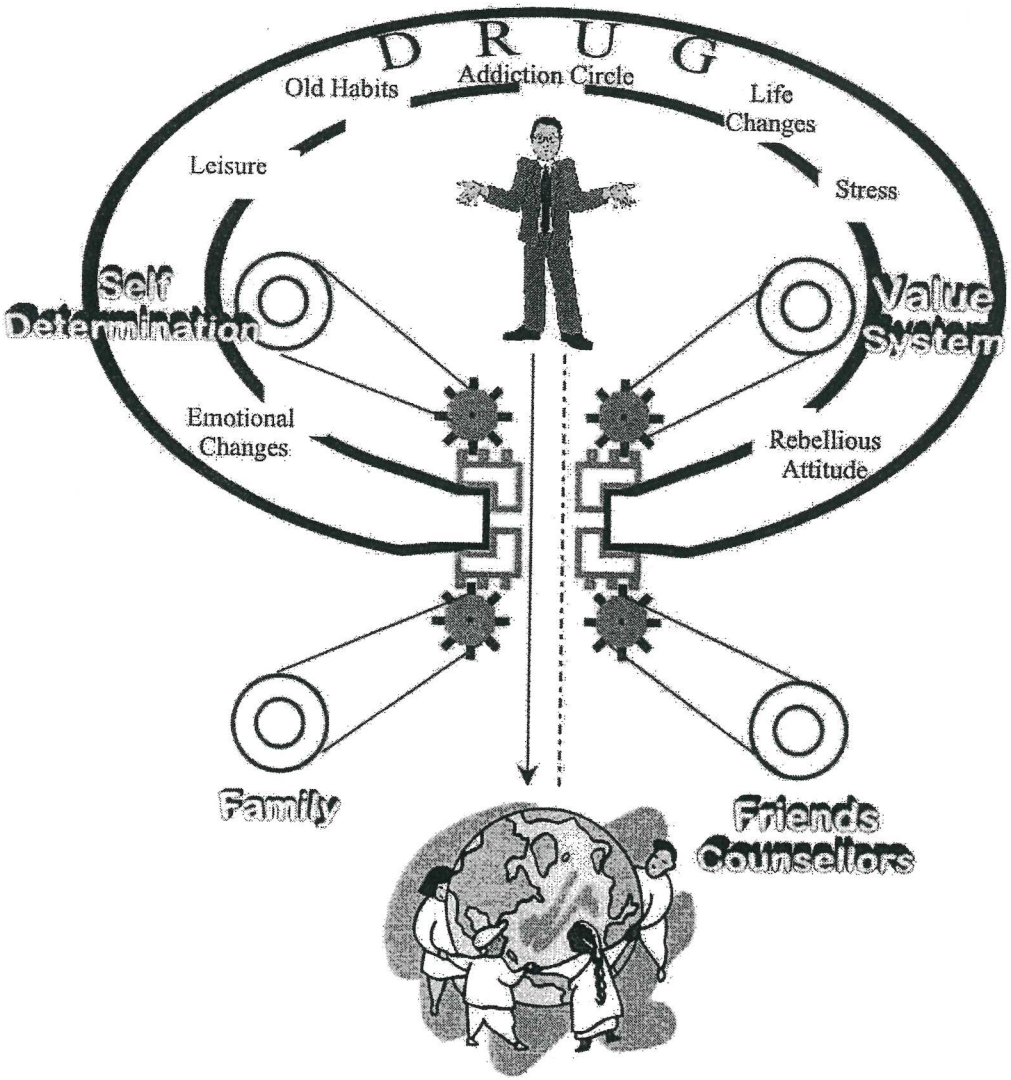
Considerable new insight was gained from the qualitative in-depth interviews. Since this was performed after the planned phase of the follow-up study, i.e., after the major part of quantitative data was collected, many findings from these interviews could not be tested quantitatively, and must be left to future studies.

From this Study, we concluded the following:

1. Different modalities of treatment for drug addiction in Hong Kong resulted in differences in intake criteria, programme contents, drop-out rates, cost per successful graduate, and abstinence rates on follow-up. While search is being made for lower relapse rates after treatment, a multi-modality approach offered opportunities to explore for different approaches and better benefits.

2. Favourable changes in the value system of the clients correlated positively with higher subsequent abstinence rates. Favourable socio-economic statuses were also correlated with higher subsequent abstinence rates. These occurred to different extents in different treatment modalities. Inter-modality referral to match client characteristics with programme strengths might be beneficial. Many items in value systems of the clients might be favourably changed by treatment programmes to obtain lower subsequent relapse rates.

3. A modification to the existing concept of interaction between the treated addict and factors in life is proposed as follows:



- The influence of drugs completely surrounds the treated addict.
- Numerous doors remain open life-long for the treated addict to re-enter the world of drugs.
- One narrow opening maintains the inner self of the treated addict with the outside world free from drugs. The world to him contains goals (achievements) in life, work (schedule & monetary reward) and non-drug options (enjoyment).
- Four motors widen the narrow opening: self-determination value changes, family support, non-addict friendship support (& counsellors).

4. 25 findings with policy implication were found. Possible policy implications are suggested.

SUMMARY FINDINGS AND POSSIBLE POLICY IMPLICATIONS OF THE STUDY

FINDINGS	POSSIBLE POLICY IMPLICATIONS
Macro Views	
1. Different modalities produce different abstinence rates.	1. Modalities may learn from one another. Interactive meetings of agencies helpful. 2. Cross referrals may yield better results.
2. Drugs remain life-long options following treatment. No particularly potent trigger. Relapse to drugs remains a life-long risk (qualitative interviews).	a. Time to next relapse would be a more reasonable measure of programme success in future studies. b. Perhaps no such thing as "cure" for drug addiction. New orientation needed. Definition of "cure" arbitrary. c. Training and development of treated-addicts towards choosing non-drug options. d. Provision of viable non-drug options. e. Clients need to establish viable goals and values in life (vide infra).
3. Subjective determination to quit drugs is 70% of the task (Unanimous consensus in qualitative interviews)	a. Shift in focus of counselling more towards mental attitudes & basic values in life. b. Objective examination of drugs vs other choices as real options with different end results for different individuals. c. Review of desirability of court sentencing to treatment centres. d. Mandatory programmes to start with convincing drug addicts to make their own decision to quit drugs.
4. Self-realization critically important in making an earnest decision to quit drugs. (qualitative interviews)	a. Counselling to focus on self-examination. b. Depth in counselling needed to achieve self-realization. Higher expertise in counsellors required; staffing implication.
5. Peer counsellors helpful in self-realization. (qualitative interviews)	a. More employment of peer counsellors. b. More training and orientation of staff towards self-examination of client. c. Experience of staff to be built.

6. Low quality of heroin nowadays decreases attraction in choosing drugs as an option. (qualitative interviews)	a. Intense customs and police action against drugs takes on added significance. b. Alternatives to drugs become relative choices. Society to make these available. c. Preferences of alternatives to drugs in addicts to be cultivated.
7. Intravenous drugs nowadays caused complications requiring amputations. (qualitative interviews)	a. Publicity on hygiene for drug abusers.
Risk Factors	
8. Different socio-demographic factors affect results to different extents in different modalities	a. Better matching and cross referral among agencies desired. b. Modification in the manner of Court sentencing to programmes indicated.
9. Structured life-style helpful in maintaining abstinence	a. Mobilization of social support for jobs, friends, family, recreation. b. Volunteers needed. c. Publicity, training and organizational implications of resources to be debated. Implication for another Drug Summit.
10. Perceived family support helpful.	a. Target of counselling to involve family more.
11. Peer Support helpful (qualitative interviews)	a. Organisation of supportive post-treatment peer groups
12. Self-confidence in avoiding drugs in various circumstances helpful.	a. Graded exposure to appropriate environment, with adequate supervision, should be introduced to build up self-confidence. b. End points of treatment to be result based rather than time determined. c. Further exploration of early integration into society (SARDA-AT model).
13. Length of addiction of only marginal consequence to treatment results.	a. De-emphasis on duration of addiction. Re-emphasis on mentality.
14. Different agencies overcome different risk factors in clients to different extents.	a. Matching of client characteristics to programme strengths desired.

Value Systems	
15. Value systems and goals in life affect treatment results in almost all programmes.	a. Establish appropriate goals in life and value systems for all clients. Establish conviction in these. Modify thinking and behaviour appropriately.
16. Absolute abstinence as treatment goal yields better results than partial abstinence or drug tolerance.	a. Total re-orientation of attitudes towards drug use. b. Social use of drugs/chemicals to be debated, e.g. cigarettes, alcohol, hypnotics, sedatives, recreational drugs. c. Public education on use vs abuse of drugs.
17. Favourable change in value systems in "sensory satisfaction", "personal life" and "social status" result in higher abstinence rates.	a. More emphasis on education of mind in counselling.
18. Changes in importance attached to "social status" i.e. wealth, career, power, reputation/face or material enjoyment, whether increased / decreased, result in higher abstinence rates.	a. Much more emphasis on self-evaluation in counselling.
Programmes	
19. Smaller programmes with prolonged client-to-staff contacts have higher abstinence rates.	a. More staff time for large programmes. b. Closer contact between staff and clients (Refer to ODB, SER, SARDA-AT)
20. More variety of service, higher frequency of service, longer treatment, greater client satisfaction with programme associated with higher subsequent abstinence rates.	a. More intensive interaction between client and programme activity and supervisors desirable, especially for larger programmes. Staffing implications.
21. Drop outs occurred with change of social workers.	a. Less change of social workers. Recognition of personal contact between client and worker does not carry over to successor. b. Re-orientation of treated-addicts towards individual workers territory-wide if possible. c. More overlap periods if change of social workers unavoidable.

22. Excessive discipline counter-productive. Lax discipline permits failure. (qualitative interviews)	a. Re-design of disciplinary aspects of programmes. b. New study in the appropriate balance and results indicated.
23. Friends, halfway houses helpful. Treated-addicts find difficulty in making friends with non-addicts. Some agencies perceive regrouping of treated-addicts as source of risk for relapse. (qualitative interviews)	a. Review of role of social network for treated-addicts. b. Peer support groups to be expanded, trimmed or redesigned as per review. Review of level of supervision in these groups needed. c. Organized recreation vs liberal individual leisure activities to be debated and tried. d. Mobilization of volunteers implicated.
24. Wide range of quality and intensity among social workers for treated-addicts. (qualitative interviews)	a. Consider courses or guidelines for social workers in drug rehabilitation.
25. Difficulty finding employment. No organisation employing treated-addicts (cf. treated-prisoners) (qualitative interviews)	a. Consider companies for treated-addicts (cf. treated-prisoners)