

BRIEF INTERVENTIONS IN SUBSTANCE ABUSE

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ABSTRACT

Brief interventions in substance abuse refer to a group of cost-effective and time efficient strategies that aim at reduction of substance use and/or harm related to substance use. They are grounded in the scientific principles of harm reduction, stage of change, motivational interviewing and feasibility of community-level delivery. This review discusses the characteristics, elements, and techniques of brief interventions for abuse of alcohol, tobacco and other drugs. The available evidence for effectiveness of these strategies vis-a-vis no treatment or extended treatment is also reviewed, which clearly supports these interventions to be effective, especially for alcohol abuse but also for others. It is argued that India presents a fertile ground for application of these strategies and that Indian research in this area should be a top priority.

Key words : Substance abuse; brief intervention; alcohol dependence; tobacco dependence

In the context of psychoactive substance abuse, brief interventions can be defined as a group of strategies which aim at reduction of substance use and/or harm related to substance, in cost-effective and time-efficient manner, by imparting brief or minimal advice/counseling to the users of alcohol, tobacco or other drugs.

Brief interventions do not consist of a single technique or strategy; rather, they consist of a heterogeneous group of strategies (e.g. simple advice of 5 minutes, detailed counseling session of 1 hour, providing just self-help manual, etc.). The similarities shared by them are in terms of - (i) brevity (less than 6 hours of contact and often 1-4 hours only), (ii) relatively less professional expertise being required and feasibility of training primary health physicians to deliver this service & (iii) target, that is, reduction of harm related to the substance (and not the use of substance only). Contrasted to these are the extended or intensive interventions for treatment of moderate to severe dependence on these substances. These extend from months to years and consist of relapse prevention strategies conducted in inpatient or outpatient

settings e.g. coping skill therapy, cue extinction, contingency contract, recovery training and self help. etc. Further, the aim of these extended therapies is mostly complete abstinence from substance use. However, it may be pointed out that this definition and explanation pertains especially to brief interventions carried out in community setting. The other type of brief interventions that are carried out in specialist agency setting do require expert personnel and often aim at complete abstinence.

Theoretical principles underlying brief interventions

Elements of brief interventions: Miller & Sanchez (1994) worked out the acronym-FRAMES for the components of brief interventions.

F: Feedback: The subject's level & pattern of substance use, existing or potential harmful effects, his awareness of these issues and motivation for change along with certain laboratory parameters (e.g. GGT for alcohol users) are assessed and a feedback of all these issues is provided to the person.

R: Responsibility: An emphasis is laid about the

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fact that to think and decide about the need for change in substance use is solely the individual's personal responsibility.

A: Advice : Based on the assessment, the physician or the therapist gives a direct professional opinion or advice to the person to make changes in substance use in the direction of a specified goal e.g. moderation.

M: Menu : The subject is provided information regarding an array of options or a menu of the various ways in which the change or the goal can be achieved. For example, keeping a diary for substance use, reading pamphlets, attending counselling session(s) and follow up.

E: Empathy : The therapeutic style adopted by the physician or the therapist is one of empathy in which he listens carefully and reflects back. The therapist communicates respect to the client, encourages exploration, reinforces the adaptive statements made by client and avoids confrontation to prevent resistance.

S: Self-efficacy : The therapist endeavours to booster client's sense of self-efficacy or optimism or perceived control. This is in absolute contrast to the philosophy of powerlessness promoted by fellowship groups like Alcoholics Anonymous.

In the case of an individual therapist imparting brief intervention to a given client, all the aforementioned elements need not be compulsorily present. Any one or more of these may need to be employed depending on therapist's expertise and client's needs. An important consideration with regard to client's needs is the stage of change in which the client currently is.

II. Stage of change concept was given by Prochaska and DiClemente (1986). These stages can be usefully addressed in diverse problems (in addition to addictions) where change of behaviour and attitude are involved. For the field of drug and alcohol abuse, these have been adapted as follows :

Precontemplation : A client is said to be in this stage when he believes that advantages from substance use outweigh its disadvantages and consequently he is not intending change in his

drug using behaviour in foreseeable future.

Contemplation : This is the stage in which the client has started considering pros and cons of continuing substance use versus discontinuing or reducing it. Ambivalence is the hallmark of this stage and it is believed that pros and cons almost equal each other. The patient intends a change in the next 6 months, for example. The therapist's role in this stage is of paramount importance and consists of tilting the balance towards the side of early change of behaviour thereby taking the client into the next stage.

Determination/Preparation : A person is said to be in this stage when he has resolved his ambivalence and is ready to participate in action-oriented intervention. During this stage he also makes a choice from the available options and finalises concrete plan of action.

Action : Overt behavioural step taken constitute action stage; for example, coming to therapist for counselling sessions, completing home assignments, and maintaining moderation of drinking.

Maintenance : After the period of intensive therapy in action stage is over, some milder amount of action is continuously required to maintain the changed behaviour, otherwise there is a risk of relapse to previous maladaptive behaviour.

Either termination or relapse : Successful observance of maintenance leads to recovery when the actions/efforts can be terminated altogether. Failure of maintenance phase leads to relapse.

To help the client move from one stage to the next one till maladaptive behaviour of hazardous use of substance is given up, Miller and Rollnick (1991) have recommended a unique counseling style which has been frequently used in brief interventions. It is called 'Motivational Interviewing'. Its main focus is on helping clients to explore and resolve ambivalence.

III. **Motivational Interviewing (Miller and Rollnick, 1991)** : There are five principles which guide the practice of motivational interviewing

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(denoted by acronym DARES)

D: Develop discrepancy : The aim is to create doubt in the client's mind regarding his conviction that substance use is giving him/her more advantages than disadvantages. The client is helped to see that by using substances, he/she is in fact impeding his/her own progress towards his long-term goals or that there are problems related to substance use that significant others as well as therapist are able to see although he is not.

A. Avoid argumentation : Argumentation leads to confrontation and that in turn leads to denial and resistance on the part of the client. Hence this approach is discouraged.

R. Roll with resistance : This strategy can be particularly useful with clients who present in a highly oppositional manner and who seem to reject every idea or suggestion. There is a paradoxical element in it which often will bring the client back to a balanced or opposite perspective. For example the client saying that he can't quit drinking as all of his friends drink and the therapist responding by saying to the client that he may conclude and decide even after discussion with the therapist that it is worth it to keep on drinking as he has previously been or the therapist saying that it may be too difficult for the client to make a change.

E. Express empathy : The therapist, by making certain verbal and non-verbal communication, conveys to the client that he understands or wants to understand.

S: Support self-efficacy : The therapist takes out examples, from the client's drug use history till date, which indicate some self-control on client's part. Based on these past events, client is likely to become more optimistic of successful outcome of his efforts to modify his substance related behaviour.

Review of brief interventions in different substances

BRIEF INTERVENTIONS IN ALCOHOL USERS. The literature on brief interventions is flooded with information on interventions in alcohol use and that forms the basis of overall

understanding of practical aspects of these techniques. These interventions in alcohol can be divided into two main types (Heather, 1989) :

i) Agency based interventions : given by specialist alcohol problem agencies, e.g. drug deaddiction centres.

ii) Community based interventions : given by PHC doctor or other health workers or ex-patients.

The description that follows critically examines (i) the issues relating to recruitment and screening (ii) exclusion criteria (iii) methods of implementation.

AGENCY BASED INTERVENTIONS : As previously alluded to, these are the interventions carried out by personnel expert in the field of drug deaddiction. There is a direct therapist contact providing an opportunity for - (i) more personal involvement by staff; (ii) more accurate assessment; (iii) more control over effects.

The basic treatment scheme (Orford and Edwards, 1977) advocates (i) assessment of problems followed by; (ii) a counseling session and (iii) assessment of outcome.

(I) **ASSESSMENT** : This fulfils three needs (a) to elicit information sufficient enough to formulate plan of action; (b) to engage the client in review of his own situation - this by itself has feedback and therapeutic values; (iii) for advisory team to establish credibility persuasiveness.

Components of assessment :

(a) Levels of alcohol dependence : as already alluded to in introduction, brief interventions can also be applied to clients who display mild dependence or early dependence on substances and thereby have more self-control (compared to severe dependence).

There are many tools to measure severity of alcohol dependence :

(i) Severity of alcohol dependence questionnaire (SADQ) (Stockwell et al., 1979) : 20 items; self administered; insensitive to lower degrees of dependence.

(ii) Alcohol dependence scale (ADS) (Skinner and Allen, 1982) : 34 items, self or therapist administered; more attention to psychological aspects.

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(iii) Short-form alcohol dependence data questionnaire (SADD) (Raistrick et al., 1993) : 15 items self administered; quickest; sensitive to early signs of dependence.

(iv) Edinburgh alcohol dependence scale (EADS) (Chick, 1980) : 34 items, therapist administered; also has brief 7 item version; allows classification into early and late dependence.

(v) Ph. score from the comprehensive drinker profile (CDP) (Miller & Marlatt, 1984) : 11 item; part of "alcohol related life problems" of CDP.

Based on the scores obtained on the scale used, the client would be categorised into one of the three categories and corresponding goal and intervention will be planned/instituted (Heather, 1989). For example, for low dependence level 'moderation' of drinking would be the goal and 'brief intervention' would be instituted, whereas a patient with severe/high dependence level will be assigned to category where goal would be 'abstinence' and that would be achieved through 'intensive intervention'. This is summarized in table 1 which gives the range of scores on four of the instruments listed above which correspond to three categories of treatment goal - treatment intensity interaction.

TABLE 1
SUGGESTED RANGES OF SCORES ON FOUR MEASURES OF ALCOHOL DEPENDENCE FOR DETERMINING GOAL & INTENSITY OF INTERVENTION (ADAPTED FROM HEATHER, 1989)

Instru- ment	• Low dependence • Moderate drinking • Brief intervention	• Moderate dep. • Moderate drinking/abstinence • Brief/intensive intervention	• High/ severe dependence • Abstinence • Intensive intervention
SADO	0-20	21-40	41-60
ADS	0-13	14-30	31-51
SADD	0-9	10-14	20-45
Ph score	0-4	5-14	15-20

However, these recommendations are not based on empirical data but on the comments of the authors of the respective scales. Moreover, there is no evidence that the corresponding ranges shown on the various scales in table 1 are equivalent.

(b) Apart from level of dependence, other

measures like alcohol related complications in various areas of life assessed - viz. physical health, psychological health, occupational, social, familial, marital and legal areas of functioning. Accordingly, the subjects having one of the following characteristics would be considered unsuitable for brief intervention a) psychiatric comorbidity; b) physical illness requiring referral; c) poor social support. A client with personal choice of brief intervention, with upto low level of dependence, without comorbidities, with a supporting spouse, with internal locus of control, etc. would score favourably for intervention.

(II) COUNSELING SESSION :

- A single, detailed counseling session is undertaken - with the client (and preferably also an attendant), though a few studies have used 4 sessions (Robertson & Heather, 1986; Zweben et al., 1988).

- Discussion is held among the two (or the three when the attendant is available) persons to define goals (these goal be logically related to perception of the problems as derived from assessment/discussion).

- Areas to be covered are drinking, marital cohesiveness (when applicable), goals for work, leisure, finances and housing, etc. (Heather, 1989).

- Counseling should be based on already explained principles of 'FRAMES', 'DARES' and 'STAGES OF CHANGE'.

- The patient party is provided with a self help manual that gives them information about limits of safe drinking, harmful drinking, dependent drinking and methods of making a change or personnel to be contacted for help.

(III) ASSESSMENT OF OUTCOME : This is carried out after the study period (e.g. 12 months) using the same measures as were used at intake.

Interpreting the evidence (Table 2) : 12 studies compared effectiveness of brief interventions with extended counselling; of these 10 found brief interventions to compare quite favourably with extended counselling. Only in two studies, patients of extended counselling group did better.

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TABLE 2
BRIEF INTERVENTIONS IN ALCOHOL ABUSE : STUDIES FROM AGENCY BASED SETTINGS
(MODIFIED AFTER BIEN ET AL., 1993)

Investigator(s) and year	Subjects		Sessions	F/U	Intervention in B.I. gp	Outcome
	N	Gps				
Bien'92	92	2	2	3	Feedback + advice	BI>NT
Brown & Miller'93	28	2	2	3	Feedback + advice	BI>NT
Carpenter et al '85	30	3	NR	12	Monitoring	BI=EC
Chapman et al '88	113	3	1	18	Confrontation	BI=EC
Chick et al '88	152	3	1	24	Advice	BI<EC
Drummond et al '90	40	2	1	6	Advice	BI=EC
Edwards et al '77	100	2	1	120	Advice	BI=EC
Harris & Miller'90	34	4	1	42	Manual	BI=EC>WL
Heather et al '96	123	3	1	6	Motivational interviewing	BI>NT
Miller & Taylor'80	44	4	1	96	Manual	BI=EC
Miller et al '81	50	4	1	84	Manual	BI=EC
Robertson & Heather'86	37	2	3-4	15.5	Functional analysis	BI<EC
Sannibale'88	96	3	1-2	15.5	Advice	BI=EC
Skutte & Berg'87	48	4	1	12	Manual	BI=EC
Zweben et al '88	218	2	4	18	Conjoint advice	BI=EC

N=sample size, Gps=No. of groups, Sessions=no. of sessions, NR=not reported, F/U=follow up in months, Intervention=components of 'FRAMES' or other strategies used, BI=brief intervention, NT=no treatment, EC=extended counselling, WL=waiting list, MI=motivational interviewing, Outcome: >= more effective than, <= less effective than, = = equally effective to

However, it should be kept in mind that the subjects in these studies were having only mild problems and were not significantly dependent on alcohol. Therefore, the results should not be taken to conclude that brief interventions are as effective as extended counselling for severe dependence on alcohol (Heather, 1995).

In 3 studies involving brief interventions vs. no treatment design, all the 3 experimental groups did significantly better.

Community based intervention : Heather (1996) in his paper highlighting British experience of brief interventions in excessive alcohol consumption clarified the essential difference between two classes of brief intervention.

i) Opportunistic or primary care or community based or minimal brief interventions - delivered at primary care or community level to people who do not seek help for a problem related to alcohol and who are identified by screening in settings where they have not attended to complain of such a problem

ii) Specialist or agency-based brief interventions- are delivered in specialist alcohol treatment agencies where people have attended, or have been persuaded to attend to seek help for an

alcohol problem.

To exemplify the two, 5 minutes of simple advice found effective in the WHO multicentre trial of early intervention in primary care (Babor & Grant, 1992) tends to be much shorter, less structured, and less theoretically based than those applied in specialist settings; for example, the four sessions of Motivational Enhancement therapy over 12 weeks evaluated in project MATCH (project MATCH research group 1993).

Basic treatment scheme of community based brief interventions involves two steps I) identification and II) intervention.

I) IDENTIFICATION : This stage involves screening, lab. tests and medical history.

Screening is carried out by simple instruments like AUDIT (Saunders et al., 1993) and CAGE (Ewing, 1984), CAGE being the simpler and the older one. The limitation is questionable reliability of these subjective reports.

Laboratory tests are used as objective measures. Gamma Glutamyl Transferase (GGT) and Mean Corpuscular Hemoglobin (MCV) are commonly measured.

Medical history, history and examination

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TABLE 3
BRIEF INTERVENTIONS IN ALCOHOL ABUSE : STUDIES FROM COMMUNITY SETTINGS
(MODIFIED AFTER BIEN ET AL., 1993)

Investigator(s) and year	Subjects		Sessions	F/U	Intervention in B.I. gp.	Outcome
	N	Gps				
Anderson & Scott'92	754	2	1	12	Feedback & advice	BI>NT
Babor & Grant'92	1664	4	1	6	Advice & manual	BI>NT
Burge et al.'97	175	4	1	18	5 min BI	BI=PE=NT
Chick et al.'85	156	2	1	12	Feedback & advice (GGT)	BI>NT
Daniels et al.'92	233	3	1	6	Computer advice	BI=NT
Dunn & Ries'97	363	many	NR	NR	BI + referral	BI>NT
Eivy et al.'88	253	2	1	18	BI + referral	BI>NT
Fleming et al.'97	723	2	1	12	Advice + manual	BI>NT
Heather'87	104	3	1	6	Advice	BI=NT
Kristenson et al.'83	585	2	NR	60	Feedback & advice	BI>NT
Kuchipudi et al.'90	114	2	4	4	Feedback & advice	BI=NT
Maheswaran et al.'92	40	2	5	2	Advice	BI>NT
Person & Magnusson'89	78	2	NR	12	Feedback & advice	BI>NT
Romelsjo et al.'89	83	2	NR	12	Advice	BI=NT
Scott & Anderson'90	72	2	1	12	Feedback & advice	BI>NT
Wallace et al.'88	909	2	1	12	Feedback & advice	BI>NT

N=sample size, Gps=no. of groups, Sessions=no. of sessions, NR=not reported, F/U=follow up in months, Intervention=components of 'FRAMES' or other strategies used, BI=brief intervention, PE=psychoeducation, NT=no treatment, EC=extended counselling, WL=waiting list, MI=motivational interviewing, Outcome: >= more effective than, <= less effective than, '= equally effective to

related to organs and systems affected or damaged by liver are assessed (Skinner et al., 1984).

II) INTERVENTION :

Different subsettings and interventions within community based brief interventions : These subtypes reflect the sites of sample recruitment or interventions. They include primary health centre (PHC) level, general hospital wards, community health programmes, media promoted programmes, counselling merely aimed at referral to the site of intervention etc.

Brief interventions at PHC level : Advantages are : i) PHC worker are accessible and credible; ii) stigma and labelling are avoided; iii) opportunity for family contact exists. An example is Scottish Health Education Group's scheme called 'drinking reasonably and moderately with self-control (DRAMS)' (Heather, 1987). This package provides simple, structured, interactive method to general practitioners (G.Ps.) :

- * Four page introductory leaflet for G.P.
- * Medical record card-for details of client's repeated assessment (e.g GGT).
- * Two week drinking diary card for use by the client.
- * Self help manual - a 59 page booklet for

education of client.

During the practice of this scheme, the G.P. gives feedback to an eligible patient about his/her problems and lab. results. Advice is then given to reduce his/her drinking with the help of the manual and lastly feedbacks are given about his/her improving GGT values which act as reinforcement for the client.

Interventions in general hospital wards : Between 10-30% inpatients of general wards are heavy drinkers. Chick et al. (1985) carried out a study in such a setting and demonstrated effectiveness of a screening followed by 60 minutes of session by a nurse along with a carry home self help manual and GGT test used as feedback initially and at follow ups.

Community health programmes : One approach tried in Sweden (Kristenson et al., 1983) involved identifying problem drinkers by two GGT tests 3 weeks apart and instituting intervention in eligible cases.

Media promoted programmes : Drinker's check up (DCU) by Miller et al. (1987) is a good example of this approach. DCU is promoted in local news and media

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advertisements as follows : It is free and confidential, it is not part of a treatment programme, it is intended for drinkers in general, not necessarily alcoholics, it does not involve a label of diagnosis, it gives clear and objective feedback.

Complete DCU requires 2 visits; i) 2 hour checkup screening and assessment, and ii) a return 1 week later - for motivational feedback, if indicated.

Interpreting the evidence (Table 3) : Of the 16 studies, 11 showed brief interventions to be clearly more effective than no treatment, 5 studies found no treatment group to be improved as much as brief intervention group. The latter could possibly be due to the confounding (therapeutic) effect of research protocol on the so called no treatment group.

Brief interventions in tobacco users

The principles and techniques employed are similar to those in alcohol users with the following components being unique to tobacco abuse : i) cotinine levels in the exhaled breath or urine or saliva carbon monoxide levels in the breath are often used as objective feedback measures to assess quantity of smoking; ii) nicotine replacement therapy is often used as adjunct to various treatment modalities; iii) the advice is complete abstinence rather than moderation.

Interpreting the evidence (Table 4) : Of the 9 studies quoted, 7 compared brief interventions

with no treatment and 6 of them speak in favour of brief interventions whereas 1 study found that 'no treatment group' also did well.

Of the 2 remaining studies both showed that nicotine replacement is more effective and 1 showed that extended counselling is more effective than brief intervention.

Brief interventions in other drugs

As alluded to under tobacco users, the essential principles of assessment and intervention remain the same. The unique elements are as follows : i) thin layer chromatography or other such test are required for feedback and objective assessment; ii) Harm reduction has been adopted as the goal in certain countries and the patients are supplied safe equipment (e.g. disposable syringes) for intravenous drug use (IVDU). However, most of the nations observe complete abstinence as a policy for drugs like opioids and cannabinoids, etc., and that may partly explain unpopularity and scanty literature on brief interventions in drug abuse.

Interpreting the evidence (Table 5) : All the 3 available studies employing no treatment or placebo control design showed brief interventions to be significantly more effective than no treatment. The studies showed brief interventions to be useful in treating benzodiazepine abuse and reducing high risk behaviour.

The study by Kraft et al. (1997) showed

TABLE 4
BRIEF INTERVENTIONS IN TOBACCO DEPENDENCE

Investigator(s) and year	Subjects		Sessions	F/U	Intervention	Outcome
	N	Gps				
Altisent et al.'97	139	2	NR	12	Advice & manual	BI>NT
Fagerstrom'84	151	4	12	12	No gum/gum short F/U vs long F/U BI in all groups	Gum+BI>BI alone Long F/U+BI>Short F/U+BI
Jamrozik et al.'84	2110	4	1	12	Advice + feedback	BI>NT
Richmond et al.'86	200	2	1	36	Advice + feedback	BI>NT
Richmond et al.'93	450	3	1	24	Advice	EC>BI
Russel et al.'79	2138	4	1	12	Advice + feedback+manual	BI>NT
Russel et al.'83	1938	3	1	12	Advice + manual+gum	gum+BI>BI>NT
Russel et al.'93	600	2	NR	12	Advice & manual	BI>NT
Stewart & Rosser'82	691	3	1	12	Advice + pamphlet	BI=NT

N=sample size. Gps=no. of groups. Sessions=no. of sessions. NR=not reported. F/U=follow up in months. Intervention=components of 'FRAMES' or other strategies used. BI=brief intervention. NT=no treatment. Outcome: '>' = more effective than, '<' = less effective than, '=' = equally effective to

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TABLE 5
BRIEF INTERVENTIONS IN OTHER DRUGS

Investigator(s) and year	Subjects		Sessions	F/U	Intervention	Outcome
	N	Gps				
Baker et al.'94	121	2	1	6	Advice	BI>NT
Bashir et al.'94	40	2	1	6	Advice & manual	BI>NT
Kraft et al.'97	100	3	1	6	i 1 session/mo (BI) ii 3 session/wk iii Multi modal	i least CE ii most CE iii medium CE
Saunders et al.'95	122	2	1	6	Motivational BI vs educational	MBI> control

N=sample size, Gps=no. of groups, Sessions=no. of sessions, NR=not reported, F/U=follow up in months, Intervention=components of 'FRAMES' or other strategies used, MBI=motivational brief intervention, NT=no treatment, BI = brief intervention, Outcome: '>' = more effective than, 'CE' = cost effective

that moderate interventions are most cost effective followed by extensive or multimodal interventions and minimal or brief interventions are the least cost effective with regard to this group of drugs. This observation is similar to the one in tobacco dependence and in severe alcohol dependence. This is probably because, minimal or brief interventions by virtue of their techniques are not adequate to handle a complex and severe dependence problem leading to repeated failure (relapses) and increased long-term cost being incurred.

Relevance of brief interventions in Indian setting

Magnitude of alcohol, tobacco and drug related problems in India is enormous (Ray,1998). Clearly there is a need to reduce the morbidity of this population. Given the small manpower of experts in the field of deaddiction and difficulty for all such patients to travel to remotely based agency settings - the utilization of community setting becomes a need. Fortunately, primary health care set up in India is fairly satisfactory and utilized by a large population. Therefore, brief interventions should be undertaken on large scales preferably as part of national programmes and policies. Varma et al. (1998) demonstrated that screening is possible at PHC level and a prevalence of 10% abuse of alcohol was obtained using screening instruments. Further, Varma & Malhotra (1988) found that G.P.'s can make reliable assessment of alcohol related problems in patients.

In conclusion, brief interventions are grounded in sound scientific principles of harm reduction, stages of change, motivational interviewing, community level delivery and cost-effectiveness. Further, these principles have been well supported by sound research coming from different parts of the world. India is a fertile ground for the timely application of these interventions, both at the deaddiction agency (clinic) level as well as at the general practice/primary care level, due to various reasons such as magnitude of the problem, available infrastructure, manpower, resource allocation and time available with existing professionals. Research should progress in this direction in India as a top priority now.

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