The early history of ideas on brief interventions for alcohol

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ABSTRACT

Aims This study explores the early development of brief interventions for alcohol using a history of ideas approach with a particular focus on intervention content. Methods The source publications of the key primary studies published from approximately 1962 to 1992 were examined, followed by a brief review of the earliest reviews in this field. These studies were placed in the context of developments in alcohol research and in public health. Results After early pioneering work on brief interventions, further advances were not made until thinking about alcohol problems and their treatment, most notably on controlled drinking, along with wider changes in public health, created new conditions for progress. There was then a golden era of rapid advance in the late 1980s and early 1990s, when preventing the development of problem drinking became important for public health reasons, in addition to helping already problematic drinkers. Many research challenges identified at that time remain to be met. The content of brief interventions changed over the period of study, although not in ways well informed by research advances, and there were also obvious continuities, with a renewed emphasis on the facilitation of self-change being one important consequence of the development of internet applications. Conclusions Ideas about brief interventions have changed in important ways. Brief interventions have been studied with different populations of drinkers, with aims embracing both individual and population-level perspectives, and without well-specified contents. The brief intervention field is an appropriate target for further historical investigations, which may help thinking about addressing alcohol and other problems.

Keywords Alcohol, brief intervention, controlled drinking, history, primary care, public health.

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INTRODUCTION

This is a study in the history of ideas about drinking alcohol and how it may be influenced, focusing on the evolution of thinking about brief interventions. The World Health Organization (WHO) defines brief interventions as 'practices that aim to identify a real or potential alcohol problem and motivate an individual to do something about it' ([1], p. 6). This permissive definition lacks specificity in intervention content, a characteristic also reflected in two definitions offered by Nick Heather, a key architect of contemporary thinking on brief interventions. He described brief interventions as 'a family of interventions varying in length, structure, targets of intervention, personnel responsible for their delivery, media of communication and several other ways including their underpinning theory and intervention philosophy' [2]. The key feature of the brief intervention construct was articulated as 'a set of principles regarding intervention (arising from the public health approach to alcohol problems)' [3]. The WHO manual for use in primary care [1] identifies four types of interventions: alcohol education for those screening negative, and simple advice, brief counselling and specialist referral for increasing levels of risk as identified by the Alcohol Use Disorders Identification Test (AUDIT) [4]. We are unaware of any studies of brief interventions evaluating alcohol education for those whose drinking is not identified as risky, and thus give no further attention to this group. To investigate the development of these ideas it is necessary to situate them in relation to prevailing ideas about alcohol problems and their treatment and contemporaneous thinking more broadly. The first brief intervention trial [5–7] was undertaken by Morris Chafetz and colleagues at Massachussets General Hospital in Boston [8], published at approximately the same time as D.L. Davies' paradigm-shifting study undertaken at the Maudsley Hospital in London, of the achievement of 'normal drinking' among former alcoholics [9]. Davies' study is widely credited as being a seminal influence on ending abstinence as the exclusive goal of alcohol treatment, recognizing controlled drinking as being also legitimate [10].

It has been suggested previously that developments in the alcohol treatment research literature since 1940 'are caused less by accumulating scientific knowledge than by changes in conceptions and structurings of research and knowledge' ([11], p. 193). This may also be true of brief interventions, suggesting the possible value of a history of ideas approach to this subject. These regard 'the primary task of the historian is to offer good representations of the past. . . . not primarily to offer evaluations' [12]. They have obvious limitations; they do not prioritize situating particular ideas within institutional, professional and cultural contexts, thus potentially being relatively blind to the operation of social, economic and political power when compared to detailed historiography (e.g. [13,14]). They may, none the less, be useful to historical scholarship by identifying targets for further investigation.

The importance of ideas has been emphasized previously for alcohol [15]. History of ideas approaches have been used within a range of disciplines relevant to addiction for various purposes, using methods including literature review. Soydan [16] uses primary and secondary data sources to construct a historical account of social work as a profession and academic discipline. Jablensky [17] questions the ongoing changes in the diagnostic systems used in psychiatry. McPhail-Bell and colleagues [18] examine background documents for the 1986 Ottawa Conference, a key event in the development of health promotion as a discipline. We seek to establish whether ideas about brief intervention have changed between 1962 and 1992 by examining texts in the research literature over this period.

THE BOSTON TRIALS

The first Boston trial was the culmination of a series of studies begun in 1957 which investigated the adequacy of existing emergency room care for alcoholics [19], and included publication of preliminary findings from a subset of the study population in the year prior to the full

trial results [20]. Alcoholism was viewed explicitly as a behavioural problem amenable to intervention outside hospitals in the community [20]. The brief intervention involved a psychiatrist and a social worker seeking to capitalize on the emergency care visit by referring the patient to out-patient alcohol treatment (a clinic had been opened in Boston earlier in the 1950s). The intervention involved 'meeting patients initially with understanding, sympathy, and attention to expressed needs, however concrete they may be' [21]. These ideas held by the young Chafetz about the nature of alcohol problems co-existed alongside others, with an earlier report presenting a psychodynamic interpretation of alcoholism influenced heavily by Freud [22], thinking still strongly evident to at least one writer in 1961 [23].

The first trial alternately assigned 200 male alcoholics to experimental and usual-care groups following diagnosis of alcoholism by the chief medical officer [8]. Sixty-five brief intervention patients versus five control patients subsequently made an initial visit to the out-patient alcohol clinic, with 42 versus one completing five visits or more over a 12-month period [8]. Concern about the generalizability of these data due to the very severe nature of the problems faced by the frequently homeless study population of 'skid row alcoholics' led to a second trial designed to assess effectiveness in a less damaged population [21]. Large differences were similarly found in the second study. Chafetz went on to become the founding director of the new National Institute on Alcohol Abuse and Alcoholism in the United States at the beginning of the 1970s; however, the study of brief interventions itself was almost completely dormant during the 1960s and early 1970s [5].

CONTROLLED DRINKING: CHANGING IDEAS ABOUT THE NATURE OF ALCOHOL PROBLEMS

The contemporaneous connection with the Davies study [9] was not simply coincidental. There were broader developments in thinking about alcohol problems which were to have major implications for the subsequent development of brief intervention studies, as well as for alcohol research more generally. A punitive approach criminalizing those with alcohol problems was giving way to a more liberal approach. This arose out of a concern for the effects of labelling, which was prominent in the sociology of deviance at the time [24]. Attention to better understanding of the needs of drinkers became a constituent element of the progressive politics of the 1960s [25]. Throughout that decade and the next the disease concept of alcoholism came to be challenged and defended robustly [26-28] in a dispute about the nature of scientific thinking on alcohol problems. There

are different varieties of disease conceptions of addictions [29,30], although at its heart the disease concept involves a categorical separation of people who are unable to drink normally from those who are, making controlled drinking impossible for the former.

This was gradually challenged by explicitly behavioural conceptions of the nature of drinking problems within the treatment research community. These were already evident during the 1950s, for example in Finland, where reduced drinking was accepted as an acceptable treatment outcome measure in addition to abstinence [31]. Drinking problems, even very extreme drinking leading to disease and premature death, became defined fundamentally as a behaviour, regardless of how pathological it appeared to be. Alan Marlatt and colleagues published a key study in 1973 [32] that was a seminal influence in this challenge to the disease perspective. Later in the 1970s the dispute over the legitimacy of controlled drinking as a treatment goal erupted into a major scientific controversy. Detailed histories and evaluations of this controversy are available [10,33,34]. The key implication for the present study is that establishing controlled drinking as a treatment goal helped to create the pre-conditions for the emergence of the modern idea of brief intervention.

In so doing, problem drinking, understood as a behaviour over which control could be exerted, invited interventions providing help. This concept fitted with the emerging epidemiological perspective, which saw alcohol consumption and problems as being distributed in degrees across the entire drinking population in a roughly normal distribution, but skewed towards the heavier end [35-37]. It was also very much of its time within psychology, being part of the rise of behaviourist ideas more widely within that discipline, and in psychiatry, and the concomitant waning of influence of psychoanalytical perspectives. The ideas of Carl Rogers [38] and the humanistic psychology movement became prominent in thinking about how to help people in general with problems of any kind throughout the 1960s and 1970s. Nonetheless, humanistic and behavioural ideas had to contend with culturally powerful and thus strongly persistent ideas of character defects as they were applied to people with alcohol problems in US treatment systems and society more broadly [39].

In 1977 Edwards & Orford published a trial [40] showing equivalent outcomes for 100 married men given a single session of 'advice' in comparison with standard treatment of the time involving in-patient admission and extensive aftercare, including Alcoholics Anonymous (AA) facilitation. The approach used to the advice was not directed at treatment engagement, and instead directly involved wives in assisting the resolution of problems in their husbands [40]. Abstinence was the treat-

ment goal; general practitioners (GPs) were to be contacted for withdrawal medication and couples were:

... told that responsibility for attainment of the stated goals lay in their own hands rather than it being anything which could be taken over by others, and this message was given in sympathetic and constructive terms. It was explained that the patient would not be offered a further appointment at the clinic, but that someone would call each month to see the wife and collect news of progress [40].

This study arose from a sharing of ideas between clinicians such as Edwards & Orford and leading thinkers in the areas of epidemiology, alcohol policy and the natural history of addictions [41], and was recognized quickly as seminal, being discussed widely in the brief interventions literature that was to develop in the following years. Indeed, it was also very influential for alcohol treatment, leading treatments thereafter to become briefer and offered in out-patient settings.

THE PRIMARY CARE REVOLUTION

Also at the Maudslev hospital in London at around the same time the first primary care brief intervention trial for any health-related behaviour was being undertaken by Michael Russell and colleagues. It showed that brief GP advice to stop smoking successfully encouraged more patients to do so [42]. Developments at the WHO in thinking about the role of primary care in relation to health promotion, as embodied in the Alma-Ata Declaration of 1978, provided another stimulus to interest and activity [43]. These led to a major shift in thinking away from traditional approaches to alcohol treatment towards public health responses that emphasized instead 'strategies that could be applied in primary health care settings with a minimum of time and resources' [44]. Heavier drinkers at risk of problems were identified as the key target population for 'early' intervention with a view to preventing later, more severe, problems [43]. Brief interventions conceived in these ways served both individualand population-level prevention purposes.

Tom Babor was a key figure in the major WHO brief interventions international collaborative project that developed through the 1980s and produced the AUDIT [45], and subsequently involved a seminal trial in 10 diverse countries [44,46,47]. His name is to be found as first author on many of the key WHO publications, including the first review paper on brief interventions in primary care, published in 1986 as part of this initiative [43]. This discussed the rationale, context, evidence and methods of brief intervention in primary care; yet only findings from two alcohol trials were able to be described at that time. Neither of these was in primary care, and both were restricted to men only [43].

The Malmo study by Kristenson and colleagues [48] resulted from a large city-wide screening programme undertaken by the university preventive medicine department. Intervention among problem drinkers in the top decile of the gamma glutamyl transferase (GGT) distribution involved successive contacts with hazardous drinkers by both doctor and nurse and, like the studies by Chafetz and colleagues, the results were remarkable by today's standards. Large effects on alcohol and mental health outcomes were accompanied by impacts on health services utilization, employment and mortality [48]. Unlike most subsequent brief interventions, ongoing laboratory test results were very prominent:

Patients were offered continuing follow-up with consultations with the same physician every third month and monthly GGT tests and reinforcing contacts with the same nurse. Counselling was focused on living habits. A treatment goal of moderate drinking rather than abstinence was agreed upon. The individuals were considered to have their weaknesses and frequently exhibited slight contradictions in personal contact situations, but this was not regarded as disease. The subjects were offered support and encouragement in their efforts to change drinking habits but were given full responsibility for the outcome of their participation. Moderate drinking was tolerated when necessary as long as GGT values did not rise [48].

The other trial, by Jonathan Chick and colleagues, took place in the general hospital setting in Edinburgh [49], targeting problem drinkers [49]. After assessment, the brief intervention comprised:

counselling from the nurse. The session lasted up to 60 minutes, during which the nurse gave the patient a specially prepared booklet and engaged him in a discussion on his lifestyle and health, which helped him to weigh up the drawbacks of his pattern of drinking and to come to a decision about his future consumption. The objective was to help the patient towards problem free drinking, though abstinence was the agreed goal for some [49].

A GOLDEN AGE?

These findings, along with the growing international collaboration fostered by the WHO project, inspired a rapid upsurge in research activity on brief interventions. The research advances made in the period after the 1986 review were summarized and analysed in a review

by Bien and colleagues in 1993 [5]. With the exception of the report of the AUDIT development, this is the mostcited brief intervention study of any kind, cited more often than any primary trial (more than 780 times in October 2013), and much more often than the next most-cited review ([50] cited approximately 455 times). Bien and colleagues summarized evidence in three areas: referral to and within treatment services; those delivered in other health services; and general population-targeted media-recruited studies (e.g. advertisements in newspapers) [5]. Forty-four controlled trials were included. The first primary care-based trial was started around 1982, although not published until 1987 [51]. The contents of brief interventions included manuals/self-help, feedback and advice, brief counselling and referral. Although most interventions were single-session, primary carebased studies had not yet become especially prominent, and the evidence supported all evaluated forms of intervention [5].

Among the included studies were an evaluation of the Drinker's Check-Up, a two-session intervention designed to implement the counselling style of motivational interviewing (MI) in a brief intervention format, seeking to attract and engage problem drinkers in non-stigmatized assessment and feedback [52]. The first author, Bill Miller, was the original author of MI [53] and of other included studies, and a co-author of the review itself. The first edition of the textbook on this counselling style [54] included content on brief interventions, including a conversational topic-based approach by co-author Stephen Rollnick [55], who was later to become a major influence on brief interventions. Subsequently, Miller concentrated largely on work in treatment research. At around the same time as the development of MI, and originally associated closely with it, the transtheoretical or stages of change model of Prochaska & DiClemente [56] was to become particularly influential in smoking. Both saw behaviour change as a process in which careful nurturing of motivation was central, while the former particularly emphasized the importance of how people are spoken to and, in turn, what they say [57].

Among the key early studies (e.g. [51,58]) from this period were those by Nick Heather, who was influenced by both MI and the transtheoretical model. In a 1989 paper [59], which also covered smoking, he distinguished two main types of brief intervention content, advice and what was described as condensed cognitive-behavioural therapy (CBT). This distinction pre-dated the later application of MI ideas, and he has commented more recently that the contemporary distinction to be made is between MI-based approaches and advice, with condensed CBT persisting only in self-help approaches [60].

Heather subsequently played a key role in shaping thinking about brief interventions, producing the widely accepted definitions offered earlier in elaborating their public health potential, distinguishing them from other interventions, emphasizing a key distinction between those seeking help and those not, and consequently separating treatment from non-treatment. Central to these ideas is the view that intervention should occur 'opportunistically' whenever contacts were made, reflecting a pragmatic orientation. This needed to be carried out widely if the public health potential of brief interventions (for example, see [61]) was to be achieved. Heather himself recognized both then [2,3] and later [62] that achieving impacts on population-level health outcomes was hugely ambitious, and in all probability needed integration with other alcohol policy measures in order to fulfil this aspiration.

The conclusions reached by Bien and colleagues about what was then known and unknown [5] resonate uncomfortably well approximately 20 years later. The need to study more carefully intervention components and mechanisms of effect was emphasized [5]. This was the first journal presentation of the acronym FRAMES (Feedback, Responsibility, Advice, Menu, Empathy, Selfefficacy), although it had been presented previously in the MI book [54]. FRAMES was a brief summary of what was understood to be important content, and the full publication in which it was developed came afterwards [63]. This was intended as a guide to further research on promising content rather than a statement of known effective intervention components. Such research was not forthcoming. Assessment reactivity was prominently flagged up as a methodological concern, with analyses showing the extent of change over time in both intervention and control groups alongside between-group differences and the use of Solomon 4-group designs [64] advocated to address this phenomenon [5]. This has also not been acted upon [65,66]. Uncertainty about effectiveness among more dependent drinkers was articulated in ways not dissimilar to how the lack of evidence is discussed today (see [67,68]).

Perhaps the publication of the WHO cross-national efficacy trial in 1992 [44] or the review by Bien and colleagues published the following year [5] may be taken to represent the end of a golden age of a decade or so in which a solid foundation for future effectiveness and implementation study was formed. Although advances have continued to be made in the 20 years since, we suggest that this was the period in which a truly new paradigm had been forged.

CONTEMPORARY RELEVANCE

The perspective outlined here obviously extends the horizons of the brief interventions construct well beyond conversations comprising time-limited advice and/or counselling, the two main brief interventions applications [60], and also well beyond primary care, the setting in which the evidence has been developed most assiduously in the intervening years [60]. So, too, do the early studies. As brief interventions have, in the decades since, moved slowly from simply being objects of research scrutiny to also become large-scale national implementation programmes in primary care and other health settings [62], there has been a need to define precisely what it is that managers and practitioners are being asked to do that will implement public health principles. Hence, the idea of brief intervention has been taken increasingly to be synonymous with advice. or sometimes also including counselling, although deliverv in routine practice in services is usually very brief, or 'minimal', to use another term introduced by Heather [69], often taking much less than 5 minutes [70,71]. Despite the compilation of an evidence-base in primary care over approximately 25 years, there remains a lack of clarity about the contents of brief interventions [72] and the extent to which existing trials can be interpreted as efficacy or effectiveness studies with important implications for the generalizability of these data [60.70.73].

A further era of rapid progress in research activity on brief interventions, perhaps comparable to that of the late 1980s and early 1990s, is now occurring. This is particularly true in relation to implementation research on large programmes within health services, in some of which alcohol interventions are integrated within other health-care needs, and referral is again becoming more prominent in brief interventions [70,71,74-81]. The aspiration to intervene early to prevent problems developing in the first place, or becoming worse, is enduringly appealing for many reasons, particularly as young people are targeted more widely as awareness grows of the need to do so [82-84]. Brief interventions delivered by computers and the internet, for whom university students are prominent in the emerging literature [85-90], is another area which has seen major upsurges in research activity. Internet interventions herald new possibilities for developing the content of brief interventions and potentially pose something of an identity crisis for brief interventions. Because extensive and recurrent reach is possible, unmediated by human contact, this means that interventions arising from the public health understanding of alcohol problems no longer need to be brief (for example, see [91]). Although comparative studies exist [92]. studies of the integration of brief conversations and information technology have not, however, advanced far. A further theme running through recent developments is the need to balance multiple intervention possibilities for a range of different behaviours or problems in a complementary package (for example [93]). One of the most

interesting consequences of the development of the internet for ideas about brief interventions and their content has been the renaissance of an overt emphasis on the facilitation of self-change [94].

Brief interventions for alcohol make sense because encouraging people to engage pro-actively in assisted reflection on this behaviour, whether or not they have problems, is itself a key public health challenge in the general population. For other behavioural problems, such as smoking cessation, this probably matters less than more technique- and content-focused efforts to help those who have already decided to change, and briefer interventions are less effective than more extended interventions [95]. This certainly does not mean that brief intervention content does not matter for alcohol, rather that it matters differently, and the slow pace of progress over the longer term needs to be rectified urgently for this literature to develop further [72]. With the exception of MI, it is not obvious that other psychological treatment approaches have been influential in the development of brief interventions over time, although this may be changing [96]. Where problems are more obvious, it may be that the idea of brief intervention is less attractive, whereas the converse may be true for efforts to promote physical activity, sexual health and mental health, and to reduce risks associated with overeating or drug use. The WHO continues to be a key stimulus to work on brief interventions, sponsoring the International Network on Brief Interventions for Alcohol and Other Drugs (INEBRIA) (http://www.inebria.net), the contemporary international network in this area, which has recently extended its focus to include drug use.

CONCLUSIONS

Ideas about brief interventions changed in important ways between 1962 and 1992. The populations among whom they were evaluated broadened from existing problem drinkers to also include heavy drinkers who may later develop problems, making preventing rather than treating problem drinking more important aims. This reflected the influence of a public health conception of the possible value of brief interventions. Ideas about brief interventions have not been insulated from developments in thinking about the nature of alcohol problems. Pressures on time in primary care and other busy settings make the idea of brief intervention enduringly attractive and compel innovations in thinking about content [70,85]. Changing ideas about brief intervention content have not obviously been shaped strongly by research advances, as appears to also be the case for alcohol treatment [11]. Brief interventions have been more focused on making and taking opportunities for interventions than well-specified activities with distinct characteristics. The

brief intervention field is an appropriate target for further historical investigations that place these changes in ideas into their wider contexts. Such studies can inform new thinking about alcohol problems more broadly. There is a rich heritage to draw upon in developing and targeting appropriate content, whatever it is, whenever and however it is delivered, to meet more effectively the needs of people struggling to control their drinking, or who may otherwise benefit from thinking afresh about a difficult issue. We should draw upon it.

Declaration of interests

None.

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References

- Babor T. F., Higgins-Biddle J. C. Brief Intervention for Hazardous and Harmful Drinking: A Manual for Use in Primary Care. Geneva: World Health Organization; 2001.
- Heather N. Interpreting the evidence on brief interventions for excessive drinkers: the need for caution. *Alcohol Alcohol* 1995; 30: 287–96.
- Heather N. The public health and brief interventions for excessive alcohol consumption: the British experience. *Addict Behav* 1996; 21: 857–68.
- Babor T. F., Higgins-Biddle J. C., Saunders J. B., Montiero M. G. The Alcohol Use Identification Test: Guidelines for Use in Primary Care, 2nd edn. Geneva, Switzerland: World Health Organization; 2001.
- Bien T. H., Miller W. R., Tonigan S. J. Brief interventions for alcohol problems: a review. *Addiction* 1993; 88: 315–36.
- 6. Saitz R. Screening and brief intervention enter their 5th decade. *Subst Abus* 2007; **28**: 3–6.
- McCambridge J. Fifty years of brief intervention effectiveness trials for heavy drinkers. *Drug Alcohol Rev* 2011; 30: 567–8.
- Chafetz M., Blane H., Abram H., Golner J., Lacy E., McCourt W. *et al.* Establishing treatment relations with alcoholics. *J Nerv Ment Dis* 1962; 134: 395–409.

- 9. Davies D. L. Normal drinking in recovered alcohol addicts. *Q J Stud Alcohol* 1962; **23**: 94–104.
- 10. Heather N., Robertson I. *Controlled Drinking*. London: Methuen; 1981.
- Giesbrecht N., Pernanen K. Sociological persectives on the alcoholism treatment literature since 1940. In: Galanter M., editor. *Recent Developments in Alcoholism*. New York: Plenum Press; 1987, pp. 175–202.
- Megill A., Zhang X. Questions on the history of ideas and its neighbours. *Rethinking Hist: J Theory Pract* 2013; 17: 333– 53.
- Berridge V. Drugs and social policy: the establishment of drug control in Britain 1900–30. Br J Addict 1984; 79: 17–29.
- Thom B. From alcoholism treatment to the alcohol harm reduction strategy for England: an overview of alcohol policy since 1950. *Am J Addict* 2005; 14: 416–25.
- Edwards G. The trouble with drink: why ideas matter. Addiction 2010; 105: 797–804.
- Soydan H. Understanding social work in the history of ideas. Res Soc Work Pract 2012; 22: 468–80.
- Jablensky A. The disease entity in psychiatry: fact or fiction? Epidemiol Psychiatr Sci 2012; 21: 255–64.
- McPhail-Bell K., Fredericks B., Brough M. Beyond the accolades: a postcolonial critique of the foundations of the Ottawa Charter. *Glob Health Promot* 2013; 20: 22–9.
- Mendelson J. H., Chafetz M. E. Alcoholism as an emergency ward problem. *Q J Stud Alcohol* 1959; 20: 270–5.
- Chafetz M. E. A procedure for establishing therapeutic contact with the alcoholic. *Q J Stud Alcohol* 1961; 22: 325–8.
- Chafetz M. E., Blane H. T., Abram H. S., Clark E., Golner J. H., Hastie E. L. *et al.* Establishing treatment relations with alcoholics: a supplementary report. *J Nerv Ment Dis* 1964; 138: 390–3.
- Chafetz M. E. Practical and theoretical considerations in the psychotherapy of alcoholism. *Q J Stud Alcohol* 1959; 20: 281–91.
- Edwards G. Visiting America: notes from an alcoholfocused study tour made in 1961. Addiction 2008; 103: 1939–47.
- 24. Room R. Individualized control of drinkers: back to the future? *Contemp Drug Probl* 2012; **39**: 311–43.
- Room R. Conversation with Robin Room. Addiction 2012; 107: 493–500.
- Mulford H. A., Miller D. E. Public definitions of the alcoholic. Q J Stud Alcohol 1961; 22: 312–20.
- Mulford H. A., Miller D. E. Measuring public acceptance of the alcoholic as a sick person. *Q J Stud Alcohol* 1964; 25: 314–23.
- Trice H. M., Roman P. M. The sick role, labelling theory, and the deviant drinker. *Int J Soc Psychiatry* 1968; 14: 245– 51.
- 29. Jellinek E. M. Phases of alcohol addiction. *Q J Stud AlcoholAlcohol* 1952; **13**: 673–84.
- Jellinek E. M. The Disease Concept of Alcoholism. New Brunswick, NJ: Hillhouse Press; 1960.
- Bruun K. Outcome of different types of treatment of alcoholics. QJ Stud Alcohol 1963; 24: 280–8.
- Marlatt G. A., Demming B., Reid J. B. Loss of control drinking in alcoholics: an experimental analogue. *J Abnorm Psychol* 1973; 81: 233–41.
- Miller W. R. Controlled drinking. A history and a critical review. J Stud Alcohol 1983; 44: 68–83.

- Roizen R. The great controlled-drinking controversy. In: Galanter M., editor. *Recent Developments in Alcoholism*, vol. 5. New York: Plenum Press; 1987, pp. 245–79.
- Ledermann S. Alcool, alcoolisme, alcoolisation:Données scientifiques de caractère physiologique, economique et social (Institut National d'Etudes Démographiques, Trav. et Doc., Cah. no. 29). Paris: Presses Universitaires de France; 1956.
- Ledermann S. Alcool, alcoolisme, alcoolisation: Mortalité, morbidité, accidents du travail (Institut National d'Etudes Demographiques, Trav. Et Doc., Cah. no. 41). Paris: Presses Universitaires de France; 1964.
- Skog O. J. The collectivity of drinking cultures: a theory of the distribution of alcohol consumption. *Br J Addict* 1985; 80: 83–99.
- Rogers C. Client-Centered Therapy: Its Current Practice, Implications and Theory. London: Constable; 1951.
- Miller W. R., McLellan A. T. G. Alan Marlatt: 1941–2011. J Subst Abuse Treat 2011; 41: 331–4.
- Edwards G., Orford J., Egbert S., Guthrie S., Hawker A., Hensman C. *et al.* Alcoholism: a controlled trial of 'treatment' and 'advice'. *J Stud Alcohol* 1977; 38: 1004–31.
- 41. Edwards G. Journal interview. Conversation with Griffith Edwards. *Addiction* 2005; **100**: 9–18.
- Russell M. A., Wilson C., Taylor C., Baker C. D. Effect of general practitioners' advice against smoking. *BMJ* 1979; 2: 231–5.
- 43. Babor T. F., Ritson E. B., Hodgson R. J. Alcohol related problems in the primary health care setting: a review of early intervention strategies. Br J Addict 1986; 81: 23– 46.
- 44. Babor T., Grant M. Project on Identification and Management of Alcohol-Related Problems Report on Phase II: A Randomized Clinical Trial of Brief Interventions in Primary Care. Geneva: World Health Organization; 1992.
- 45. Saunders J. B., Aasland O. G., Amundsen A., Grant M. Alcohol consumption and related problems among primary health care patients: WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption: I. Addiction 1993; 88: 249–362.
- 46. Babor T. F., Grant M., Acuda W., Burns F. H., Campillo C., Del Boca F. K. *et al.* A randomized clinical trial of brief interventions in primary care: summary of a WHO project. *Addiction* 1994; 89: 657–60.
- 47. World Health Organization (WHO) Brief Intervention Study Group. A cross-national trial of brief interventions with heavy drinkers. *Am J Public Health* 1996; 86: 948–55.
- 48. Kristenson H., Ohlin H., Hulten-Nosslin M. B., Trell E., Hood B. Identification and intervention of heavy drinking in middle-aged men: results and follow-up of 24–60 months of long-term study with randomized controls. *Alcohol Clin Exp Res* 1983; 7: 203–9.
- Chick J., Lloyd G., Crombie E. Counselling problem drinkers in medical wards: a controlled study. *BMJ* 1985; 290: 965–7.
- Moyer A., Finney J. W., Swearingen C. E., Vergun P. Brief interventions for alcohol problems: a meta-analytic review of controlled investigations in treatment-seeking and non-treatment-seeking populations. *Addiction* 2002; 97: 279–92.
- 51. Heather N., Campion P. C., Neville R. G., Maccabe D. Evaluation of a controlled drinking minimal intervention for problem drinkers in general practice (the DRAMS scheme). *J R Coll Gen Pract* 1987; **37**: 358–63.

- Miller W. R., Sovereign R. G., Krege B. Motivational interviewing with problem drinkers: II. The Drinker's Check-up as preventive intervention. *Behav Psychother* 1988; 16: 251–68.
- 53. Miller W. R. Motivational interviewing with problem drinkers. *Behav Psychother* 1983; 11: 147–72.
- Miller W. R., Rollnick S. Motivational Interviewing: Preparing People to Change Addictive Behavior. New York: Guilford Press; 1991.
- 55. Rollnick S., Bell A., Miller W. R. Brief Motivational Interviewing for Use by the Nonspecialist, in Motivational Interviewing: Preparing People to Change Addictive Behaviour. New York: Guilford Press; 1991.
- Prochaska J. O., DiClemente C. C. Stages and processes of self-change of smoking: toward an integrative model of change. J Consult Clin Psychol 1983; 51: 390–5.
- 57. Moyers T. B., Martin T., Christopher P. J., Houck J. M., Tonigan J. S., Amrhein P. C. Client language as a mediator of motivational interviewing efficacy: where is the evidence? *Alcohol Clin Exp Res* 2007; **31**: 40s–7s.
- Heather N., Whitton B., Robertson I. Evaluation of a self-help manual for media-recruited problem drinkers: six-month follow-up results. *Br J Clin Psychol* 1986; 25: 19–34.
- Heather N. Psychology and brief interventions. Br J Addict 1989; 84: 357–70.
- Heather N. Breaking new ground in the study and practice of alcohol brief interventions. *Drug Alcohol Rev* 2010; 29: 584–8.
- Wallace P., Cutler S., Haines A. Randomised controlled trial of general practitioner intervention in patients with excessive alcohol consumption. *BMJ* 1988; 297: 663–8.
- 62. Heather N. Can screening and brief intervention lead to population-level reductions in alcohol-related harm? *Addict Sci Clin Pract* 2012; 7: 15.
- 63. Miller W. R., Sanchez V. C., Howard G. S., Nathan P. E. Motivating Young Adults for Treatment and Lifestyle Change, in Alcohol Use and Misuse by Young Adults. Notre Dame: University of Notre Dame; 1994.
- Solomon R. L. An extension of control group design. *Psychol Bull* 1949; 46: 137–50.
- 65. McCambridge J., Kypri K. Can simply answering research questions change behaviour? Systematic review and meta analyses of brief alcohol intervention trials. *PLOS ONE* 2011; 6: e23748.
- 66. McCambridge J., Butor-Bhavsar K., Witton J., Elbourne D. Can research assessments themselves cause bias in behaviour change trials? A systematic review of evidence from Solomon 4-group studies. *PLOS ONE* 2011; 6: e25223.
- Saitz R. Alcohol screening and brief intervention in primary care: absence of evidence for efficacy in people with dependence or very heavy drinking. *Drug Alcohol Rev* 2010; 29: 631–40.
- McCambridge J., Rollnick S. Should brief interventions in primary care more strongly address alcohol problems? *Addiction*; in press; 2013. doi: 10.1111/add12388.
- Heather N. Brief intervention strategies. In: Hester R. K., Miller W. R., editors. *Handbook of Alcoholism Treatment Approaches: Effective Alternatives*. London: Allyn and Bacon; 1995, pp. 105–22.
- Nilsen P., McCambridge J., Karlsson N., Bendtsen P. Brief interventions in routine health care: a population-based study of conversations about alcohol in Sweden. *Addiction* 2011; 106: 1748–56.

- Makela P., Havio M., Seppa K. Alcohol-related discussions in health care—a population view. *Addiction* 2011; 106: 1239–48.
- McCambridge J. Brief intervention content matters. Drug Alcohol Rev 2013; 32: 339–41.
- 73. Kaner E. F., Beyer F., Dickonson H. O., Pienaar E., Campbell F., Schlesinger C., *et al.* Effectiveness of brief alcohol interventions in primary care populations. *Cochrane Database Syst Rev* 2007; (2): CD004148. doi: 10.1002/14651858. CD004148.pub3.
- 74. Babor T. F., McRee B. G., Kassebaum P. A., Grimaldi P. L., Ahmed K., Bray J. Screening, Brief Intervention, and Referral to Treatment (SBIRT): toward a public health approach to the management of substance abuse. *Subst Abus* 2007; 28: 7–30.
- 75. Madras B. K., Compton W. M., Avula D., Stegbauer T., Stein J. B., Clark H. W. Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: comparison at intake and 6 months later. *Drug Alcohol Depend* 2009; **99**: 280– 95.
- Bernstein E., Bernstein J. A., Stein J. B., Saitz R. SBIRT in emergency care settings: are we ready to take it to scale? *Acad Emerg Med* 2009; 16: 1072–7.
- Davoudi M., Rawson R. A. Screening, brief intervention, and referral to treatment (SBIRT) initiatives in California: notable trends, challenges, and recommendations. *J Psychoact Drugs* 2010; Suppl 6: 239–48.
- Gryczynski J., Mitchell S. G., Peterson T. R., Gonzales A., Moseley A., Schwartz R. P. The relationship between services delivered and substance use outcomes in New Mexico's Screening, Brief Intervention, Referral and Treatment (SBIRT) Initiative. *Drug Alcohol Depend* 2011; 118: 152–7.
- McCance-Katz E. F., Satterfield J. SBIRT: a key to integrate prevention and treatment of substance abuse in primary care. *Am J Addict* 2012; 21: 176–7.
- 80. Gonzales A., Westerberg V. S., Peterson T. R., Moseley A., Gryczynski J., Mitchell S. G. *et al.* Implementing a statewide Screening, Brief Intervention, and Referral to Treatment (SBIRT) service in rural health settings: New Mexico SBIRT. *Subst Abus* 2012; **33**: 114–23.
- 81. Young M. M., Stevens A., Porath-Waller A., Pirie T., Garritty C., Skidmore B. *et al.* Effectiveness of brief interventions as part of the screening, brief intervention and referral to treatment (SBIRT) model for reducing the non-medical use of psychoactive substances: a systematic review protocol. *Syst Rev* 2012; 1: 22.
- Tait R. J., Christensen H. Internet-based interventions for young people with problematic substance use: a systematic review. *Med J Aust* 2010; **192**: S15–21.
- Walters S. T., Neighbors C. College prevention: a view of present (and future) web-based approaches. *Alcohol Res Health* 2011; 34: 222–4.
- Carey K. B., Scott-Sheldon L. A., Carey M. P., DeMartini K. S. Individual-level interventions to reduce college student drinking: a meta-analytic review. *Addict Behav* 2007; 32: 2469–94.
- Kypri K., Sitharthan T., Cunningham J. A., Kavanagh D. J., Dean J. I. Innovative approaches to intervention for problem drinking. *Curr Opin Psychiatry* 2005; 18: 229–34.
- Rooke S., Thorsteinsson E., Karpin A., Copeland J., Allsop D. Computer-delivered interventions for alcohol and tobacco use: a meta-analysis. *Addiction* 2010; **105**: 1381–90.

- Cunningham J. A., Khadjesari Z., Bewick B. M., Riper H. Internet-based interventions for problem drinkers: from efficacy trials to implementation. *Drug Alcohol Rev* 2010; 29: 617–22.
- Riper H., Spek V., Boon B., Conijn B., Kramer J., Martin-Abello K. *et al.* Effectiveness of E-self-help interventions for curbing adult problem drinking: a meta-analysis. *J Med Internet Res* 2011; 13: e42.
- Kypri K., McCambridge J., Cunningham J. A., Vater T., Bowe S., De Graaf B. *et al.* Web-based alcohol screening and brief intervention for Maori and non-Maori: the New Zealand e-SBINZ trials. *BMC Public Health* 2010; **10**: 781.
- 90. McCambridge J., Bendtsen P., Bendtsen M., Nilsen P. Alcohol email assessment and feedback study dismantling effectiveness for university students (AMADEUS-1): study protocol for a randomized controlled trial. *Trials* 2012; 13: 49.
- Linke S., McCambridge J., Khadjesari Z., Wallace P., Murray E. Development of a psychologically enhanced interactive online intervention for hazardous drinking. *Alcohol Alcohol* 2008; 43: 669–74.
- Carey K. B., Scott-Sheldon L. A., Elliott J. C., Garey L., Carey M. P. Face-to-face versus computer-delivered

alcohol interventions for college drinkers: a meta-analytic review, 1998 to 2010. *Clin Psychol Rev* 2012; **32**: 690–703.

- 93. McCambridge J., Strang J. Development of a structured generic drug intervention model for public health purposes: a brief application of motivational interviewing with young people. *Drug Alcohol Rev* 2003; **22**: 391–9.
- Klingemann H., Sobell M. B., Sobell L. C. Continuities and changes in self-change research. *Addiction* 2010; 105: 1510–8.
- 95. Fiore M. C., Jaen C. R., Baker T. B., Bailey W. C., Benowitz N. L., Curry S. J. et al. Treating Tobacco Use and Dependence: 2008 Update. Rockville, MD: Department of Health and Human Services. Public Health Service; 2008. Available at: http://www.surgeongeneral.gov/tobacco/treating_tobacco _use08.pdf (accessed 23 January 2014). (Archived at http://www.webcitation.org/6MxWTC909 on 28 January 2014).
- Michie S., Whittington C., Hamoudi Z., Zarnani F., Tober G., West R. Identification of behaviour change techniques to reduce excessive alcohol consumption. *Addiction* 2012; 107: 1431–40.