8
Promoting Self-Change: Taking the Treatment to the Community

Linda Carter Sobell and Mark B. Sobell

As discussed in detail in Chapter 1, the vast majority of people with alcohol and drug problems are unlikely to enter traditional substance abuse or addiction treatment programs (Harris & Mckellar, 2003). Several major U.S. surveys have concluded that only a small percentage of individuals with alcohol problems ever seek and enter into treatment (Dawson, Grant, Stinson, et al., 2005; Raimo, Daeppen, Smith, Danko, & Schuckit, 1999). For example, of 4,422 adults 18 years or older classified with prior-to past-year DSM-IV alcohol dependence in the 2001–2 National Epidemiologic Survey on Alcohol and Related Conditions (Dawson, Grant, Stinson, et al., 2005), only 25.5% reported ever receiving treatment (12-Step programs: 3.1%; Formal treatment: 5.4%; both 12-Step and treatment: 17.0%). Another national survey found "only 16% of those with an alcohol use disorder (AUD) had received any treatment in 2001. Similarly, a recent report on utilization of AUD treatment in the Veterans Administration found that only 23% of individuals with an identified disorder received treatment" (Harris & McKellar, 2003, p. 1). Clearly, such figures underscore the need to seriously develop and evaluate alternative, minimally intrusive interventions that will appeal to such individuals.

For close to three decades, treatment for individuals with alcohol and drug problems has been provided almost exclusively at traditional specialty substance abuse agencies. If individuals with substance use and abuse problems are unwilling to come into treatment, the key question is "What can be done to motivate them to change their substance use outside of treatment or as a result of a very brief encounter?" One suggestion has been that we should take the treatment to the people (Sobell, Cunningham, Sobell, et al., 1996; Sobell, Sobell, Leo, et al., 2002). Alternative interventions need to be provided in settings other than traditional substance abuse agencies, such as physicians' offices, primary care settings, or nontraditional ways such as on the Internet or by mail.

Interestingly, effective January 2007, the U.S. Centers for Medicare and Medicaid Services added two new reimbursement codes for use by Medicaid, Medicare, and other third-party payers. These codes allow providers to be reimbursed for alcohol and drug screenings and brief interventions (SBIs)

in clinical settings. Bertha Madras (2006), Deputy Director of Demand Reduction from the White House Office of National Drug Control Policy, reported that the "impetus behind the Medicaid decision to reimburse for alcohol and drug screening services was the recognition of the number of people who go unidentified who are in need of an intervention or treatment" (Medscape Medical News, 2006). In addition to the fact that so few substance abusers seek treatment, the other compelling reason behind these two new codes appears to be financial. It is estimated that conducting alcohol and drug SBIs in clinical settings will save the federal Medicaid budget $520 million annually. Given scarce medical resources and health care cost containment, such savings could be used in a stepped-care manner where the first intervention is minimal, of low intensity, least costly, likely to be effective, and has consumer appeal (Sobell & Sobell, 2000). For those where such interventions are successful, their further progress need only be monitored. For those where it was not effective, their care could be stepped up (i.e., more intensive treatment) using some of the savings from the SBIs. Such thinking is consistent with a stepped-care model of treatment (Davison, 2000; Foulds & Jarvis, 1995; Sobell & Sobell, 2000). In summary, successful methods of promoting self–change would allow for widespread impact on substance use problems and at a much lower cost than traditional treatment.

Self–Change Approaches

Self-change approaches have long been part of many brief interventions that help substance abusers evaluate and guide their own behavior change (Apodaca & Miller, 2003; Fleming & Manwell, 1999; Heather, 1994; Heather, Rollnick, Bell, & Richmond, 1996; Sitharthan, Kavanagh, & Sayer, 1996; Sobell & Sobell, 1993, 1999). Factors associated with the development of self-change approaches have included: (a) the need for interventions for individuals whose substance use problems are not severe, particularly those with alcohol problems (Sobell & Sobell, 1993, 1999, 2005), (b) demonstrations that, for many individuals, brief interventions are as beneficial as more intense interventions (Bien, Miller, & Tonigan, 1993; Fleming & Manwell, 1999; Miller et al., 1995; Moyer, Finney, Swearingen, & Vergun, 2002; Project MATCH Research Group, 1998a, b; Saunders, Kypri, Walters, Laforge, & Larimer, 2004; Sobell, Breslin, & Sobell, 1998), and (c) an emphasis on self-control processes in the evolution of cognitive–behavior therapy (e.g., Mahoney & Lyddon, 1988; Thoresen & Mahoney, 1974).

The success of brief self-change treatments for substance abusers suggests that even before entering treatment such individuals possess sufficient skills to function effectively (Sobell & Sobell, 1998). This, in turn, suggests that the major role of these treatments might be motivational; that is, they serve to catalyze people's use of their own resources to bring about behavior change. In a study that provides some support for the idea that self–change

approaches and minimal interventions might appeal to adult drinkers, Werch (1990) found that over one-quarter of all drinkers reported an interest in receiving aids to help them drink more moderately. Moreover, drinkers who were interested in receiving one or more self-help aids reported high levels of drinking and a greater motivation to limit their alcohol use. This study suggests that a considerable number of drinkers, especially heavier drinkers, would be receptive to aids to help them drink less.

A nontraditional way of facilitating self-change with regard to excessive drinking has been through the use of very brief interventions by physicians in primary care health settings. These interventions usually consist of a short inquiry followed by brief advice and feedback when warranted. An important characteristic of these interventions is that although typically the patients' reasons for visiting their physician have nothing to do with their alcohol use, as part of the visit doctors can ask an individual about their alcohol use and determine if a patient's drinking exceeds recommended guidelines (Dawson, Grant, & Li, 2005; National Institute on Alcohol Abuse and Alcoholism, 1995, 2007). At this point, physicians can then raise concerns (e.g., "cutting back on your alcohol use might be helpful in lowering your hypertension levels") and suggest that patients reduce their drinking to recommended levels. Such interventions have produced significant decreases in drinking, and they can reach a much broader population than that served by traditional substance abuse programs (Fleming & Manwell, 1999; Fleming et al., 2000, 2002; National Institute on Alcohol Abuse and Alcoholism, 2007; Wutzke, Shiell, Gomel, & Conigrave, 2001). Minimal interventions can also be conducted by correspondence or e-mail for individuals unwilling to come into treatment, in addition to those unable to attend treatment for other reasons such as transportation problems, lack of available child care, or living in rural areas (Breslin, Sobell, Sobell, Buchan, & Kwan, 1996; Jeffery, Hellerstedt, & Schmid, 1990; Lando et al., 1997; Ramelson, Friedman, & Ockene, 1999; Sitharthan et al., 1996; Zhu et al., 1996).

Several studies have reported positive outcomes using media campaigns to reduce the prevalence of smoking (Campion, Owen, Mcneill, & Mcguire, 1994; Giffen, 1991; Hughes, Cummings, & Hyland, 1999; Killen, Fortmann, Newman, & Varady, 1990; Lichtenstein, Lando, & Nothwehr, 1994; Pirie, Rooney, Pechacek, Lando, & Schmid, 1997; Utz, Shuster, Merwin, & Williams, 1994; Warner, 1981, 1989). Typically, these studies involved large-scale ad campaigns that either addressed the health risks of smoking or derided the positive value of smoking behavior (e.g., it's not cool to smoke). Interestingly, large community interventions or mass media campaigns aimed at secondary prevention have almost exclusively targeted smokers. With one exception (Sobell, Cunningham, Sobell, et al., 1996), campaigns for other addictive behaviors (e.g., alcohol or drug problems, gambling) have been noticeably lacking. Finally, another new and promising way of accessing the community on a large scale is through the Internet (Alemi et al., 1996; Wright, Williams, & Partridge, 1999).

In a review of brief interventions, Heather (1989) concluded:

Evidence shows that brief interventions are effective and should be used for individuals who are not actively seeking help at specialist agencies. This justification is, again independent of level of seriousness, although most recipients of community-based interventions will obviously have problems of a less severe variety. (p. 366)

Over a decade later, a meta-analytic review of controlled trials of brief interventions for alcohol problems reached similar conclusions (Moyer et al., 2002).

Tailored Nontraditional Messages

Several studies have shown that the overwhelming reason that people give for either not entering or delaying entering treatment is because of the stigma associated with being labeled (Chiauzzi & Liljegren, 1993; Corrigan, 2004; Cunningham, Sobell, & Chow, 1993; Cunningham, Sobell, Sobell, Agrawal, & Toneatto, 1993; Grant, 1997).

Naturally Recovered Alcohol Abusers Dislike Labels

Respondent 1: " 'You are an alcoholic.' People had suggested it to me before but I never really — I had vehemently denied the idea you know or the accusation."

Respondent 2: "So the desire is gone and this is where I part company with Alcoholics Anonymous and people like them, because they operate on a naturalistic bias. A naturalistic way whereas not necessarily Alcoholics Anonymous, because AA started as a Christian organization. But they say you are always an alcoholic."

In the addiction field, if researchers are to develop programs and messages that are perceived as attractive and listened to rather than avoided, then it will be necessary to understand why many individuals even with minimal alcohol and drug problems do not seek treatment. First, studies have demonstrated that

Naturally Recovered Individuals Tell Us What Would Attract Them to Treatment

Question: "If an ad were to appear on television or in a newspaper to attract individuals to seek help with their drinking problem, what wording would you suggest?"

Respondent 1: "If you could say something I guess maybe to indicate something like 'You can do it.' 'Help yourself, you can do it.' Something to give them some assurance that all is not lost."

Respondent 2: "Well, that's an interesting question. I would say something that would offer some comfort and dignity to the listener. The words that come to my mind, 'Are you sure?' "

Respondent 3: "People who drink too much are done a disservice by the use of the word 'alcoholic.' "

Respondent 4: "I would say more along the lines of getting people to realize they have a problem. Something like 'Do you drink every day? If you do, you may have a problem.' A nonthreatening thing that would say, that somebody might say 'You know I do drink every day' and then they might make a concerted effort to not drink every day. Something very simple. Not going into the blackouts and all. It's nonthreatening. Just saying 'Do you drink every day?' Not using scare tactics, just using the tactics of be aware."

labels such as "alcoholic" and "addict" should be avoided. In fact, negative messages like these are likely to be perceived as inaccurate by high-risk drinkers in the general population. Consistent with the literature, highly effective messages are those that avoid stigmatizing or labeling. Second, the message needs to be proactive. Third, the message should contain information that allows people to make better, more informed decisions about their alcohol consumption.

Because the addiction field has long been dominated by an almost exclusive focus on individuals who are severely dependent on alcohol, the general public, particularly in North America, has developed a stereotypic and stigmatizing impression of anyone who drinks excessively; such individuals are viewed as alcoholics, unable to recover without treatment, and not capable of returning to moderate drinking. In a very recent general population telephone study, respondents (N = 3006) were asked about their beliefs concerning drinking problems. It was found that fewer than half (41.5%) felt that someone with an alcohol problem could recover without treatment, and less than one-third (29%) felt such individuals could return to moderate drinking (Cunningham, Blomqvist, & Cordingley, 2007). Several other studies have also reported that the general public does not believe that untreated and moderate drinking outcomes are possible (Cunningham et al., 2007; Cunningham, Sobell, & Chow, 1993; Ferris, 1994; Nadeau, 1997). Furthermore, in two early natural recovery studies (Shaffer & Jones, 1989; Sobell, Sobell, & Toneatto, 1992), researchers reported that several respondents during their interviews asked if they were the only ones who had recovered "this way" (i.e., on their own). Lastly, one study (Cunningham, Sobell, & Sobell, 1998) reported that there was a significantly greater reluctance to self-disclose resolving an alcohol problem compared with quitting smoking cigarettes (23.7% versus 5.1%); the predominant reason (57.1%) for not wanting to talk to others was the stigma or label attached to having an alcohol problem. While self-change is the major pathway to recovery from alcohol problems, most studies suggest that the majority of people are unaware of this fact. In summary, given the beliefs held by the general populace, coupled with those who recover on their own, it is not surprising that trying to persuade someone with an alcohol problem in the general population that they can change on their own might be difficult. The fact that people hold beliefs that are not evidence-based suggests that we need to educate consumers, particularly that not everyone needs to enter treatment and that self-change is a legitimate and predominant pathway to change.

In many ways, attempting to persuade high-risk drinkers to reduce their drinking can be viewed as an exercise in attitude change. Research in cognitive social psychology tells us that when individuals receive a message with which they

Naturally Recovered Alcohol Abuser

"Well, as I mentioned previously I had tried to stop on several occasions previously and I would stop maybe for a short or fairly prolonged period of time but then I would fall back into the regular routine. So, at the end in 1960 I just made up my mind very determinedly that this thing wasn't going to beat me, I was going to beat *it* because it was ruining my relationship with my family. And sooner or later it was going to have an effect on my work."

disagree, they resist it by various means, such as formulating counterarguments (Perloff, 1993). For example, if people who are high-risk drinkers are told, "You are an alcoholic" or "You have an alcohol problem," they are likely to react by generating reasons why they are not. The message does not make sense to them. The way to avoid such counterarguments is to present the message in a nonconfrontational and nonthreatening manner, which is the same strategy used in motivational interviewing in clinical situations (Miller & Rollnick, 2002; Substance Abuse and Mental Health Administration, 2002). When recruiting problem drinkers into treatment or getting individuals to respond to advertisements about changing their drinking on their own, what has been learned is that the "content" of the message is critical.

Over the years, whether in Canada, Australia, the United States, Sweden, or Mexico, studies have recruited alcohol and drug abusers to treatment by using carefully worded statements to attract such individuals. The ads for treatment typically contain phrases such as "Are you concerned about your alcohol or drug use?" or "Are you considering changing your drinking?" (Klingemann, 1991; Miller & Hester, 1980; Miller, Taylor, & West, 1980; Pearlman, Zweben, & Li, 1989; Sobell & Sobell, 1998, 2005).

Many studies have now shown that untreated and naturally recovered substance abusers report several reasons for not seeking treatment or not seeking treatment promptly (Cunningham, Sobell, & Chow, 1993; Cunningham, Sobell, & Freedman, 1994; Cunningham, Sobell, Sobell, et al., 1993; Grant, 1997; Hingson, Mangione, Meyers, & Scotch, 1982; Roizen, 1977; Sobell, Sobell, & Toneatto, 1992; Tuchfeld, 1981). As already mentioned, among the most salient reasons are the stigma associated with the label "alcoholic" or admitting to being an alcoholic (Copeland, 1997; Cunningham et al., 1998; Cunningham, Sobell, Sobell, et al., 1993; Grant, 1997; Roizen, 1977; Sobell et al., 1992; Tuchfeld, 1981). Two other major reasons given for not seeking treatment are of interest. In a general population survey, 96% of respondents who ever had a problem reported they thought they could handle their problem on their own (Hingson et al., 1982). We found similar evidence in our own research (Sobell et al., 1992), in that 38% of naturally recovered alcohol abusers reported that they did not enter treatment because they thought they could solve their problem on their own. In fact, this reason was rated as most influential in their decision not to seek treatment. The second reason that very frequently has been given for not seeking treatment is that problem drinkers have "felt their problem was not serious enough" to seek help (Hingson et al., 1982; Miller, Sovereign, & Krege, 1988; Sobell et al., 1992; Thom, 1986). In the Hingson et al. study, 84% responded in such a manner, as did 46% in our own research. Taken collectively, and combined with the effect of stigma, these studies convincingly demonstrate significant barriers associated with seeking treatment.

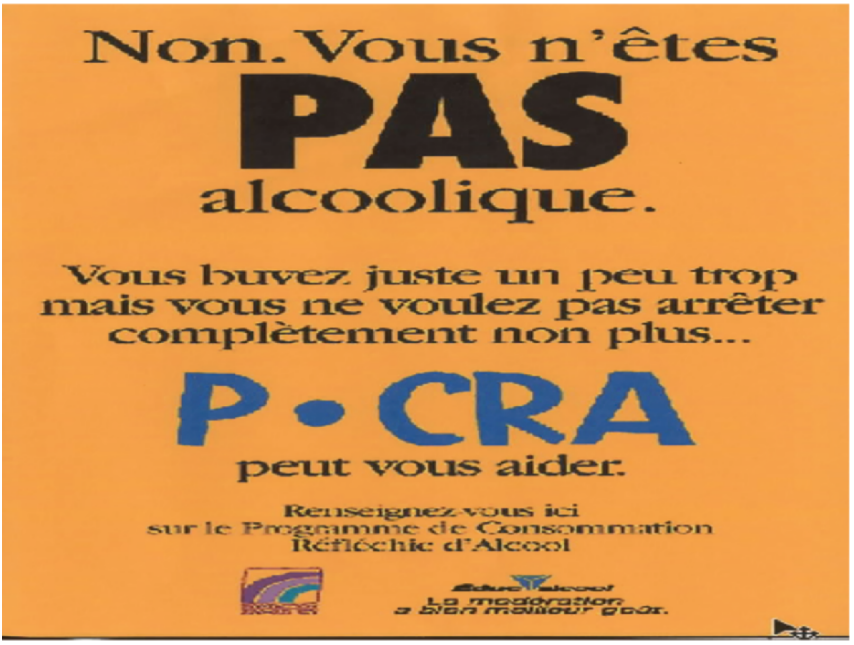
In conclusion, a concern articulated in the literature over a decade ago is still salient today: "these barriers must be addressed if we want to encourage the greater proportion of untreated alcohol and drug abusers to seek treatment" (Cunningham, Sobell, Sobell, et al., 1993, p. 353). Changing public perceptions to recognize that self-change is possible and is the predominate pathway to

change for many with an addictive behavior is critical, as is the need to provide alternative, nontraditional interventions. Because traditional treatment approaches in the substance abuse field have been hypothesized as deterring problem drinkers—those with less severe problems—from seeking treatment (Sobell & Sobell, 1993), interventions need to be tailored to the needs of different types of drinkers. Finally, it is interesting to note that adults with serious mental illness in a U.S. survey and substance abusers reported similar reasons for not seeking treatment (Substance Abuse and Mental Health Administration, 2003). Besides cost (50.4%), 28.2% of respondents reported that stigma kept them from seeking treatment and 10.4% said they did not feel a need for treatment or that they could handle their problems without treatment.

With respect to prevention and harm reduction, the same reasoning underlying motivational interventions can be used with the general public (Nadeau, 1997; Rehm, 1997). In fact, how messages are presented and what those messages say is probably even more important with substance users in the general population than with self-identified problem users who are considering changing. The reason is that substance abusers in the general public do not perceive themselves as needing to change. Thus, they should be more resistant to messages suggesting change than would be substance abusers who are already ambivalent about their alcohol or drug use. Because many untreated problem drinkers do not view their drinking as serious enough to warrant seeking treatment, one suggestion is to modify drinkers' beliefs about the normality of their drinking. Providing individuals with feedback about their drinking and where it fits in relation to national norms can be viewed as advice feedback that is intended to promote self–change by getting the person to view their heavy drinking from a new perspective. Support for providing this type of feedback also comes from a general population survey where most respondents said they first recognized a problem by recognizing the volume of their intake (Hingson et al., 1982).

For a message to be considered by, and have an impact on, an individual, it is important that the message does not evoke resistance. For example, because a small amount of drinking can have a cardiovascular protective effect (Hanna, Chou, & Grant, 1997; Svärdsudd, 1998), a proactive prevention message could be created describing the beneficial effects of limited drinking, but emphasizing that like so many other aspects of our lives, there needs to be a healthy balance between what you get out of drinking and the risks that are taken. A proactive message is less likely to evoke resistance compared with a critical message. In this regard, several years ago Éduc'alcool, an independent, not-for-profit organization, in Montreal, Quebec, Canada, designed a secondary prevention program, "Alco-Choix" (translated "Drinking Choices") that allowed for moderation goals. To solicit individuals for the program, they designed Ad 1 shown in Figure 8.1. In English the ad says: "You are not an Alcoholic. You just drink a little too much but do not want to completely stop either. P.CRA can help you. Inquire here about the Alcohol Consumption Program." The logo at the bottom says: "Moderation tastes better."

Ad 1



Ad 2

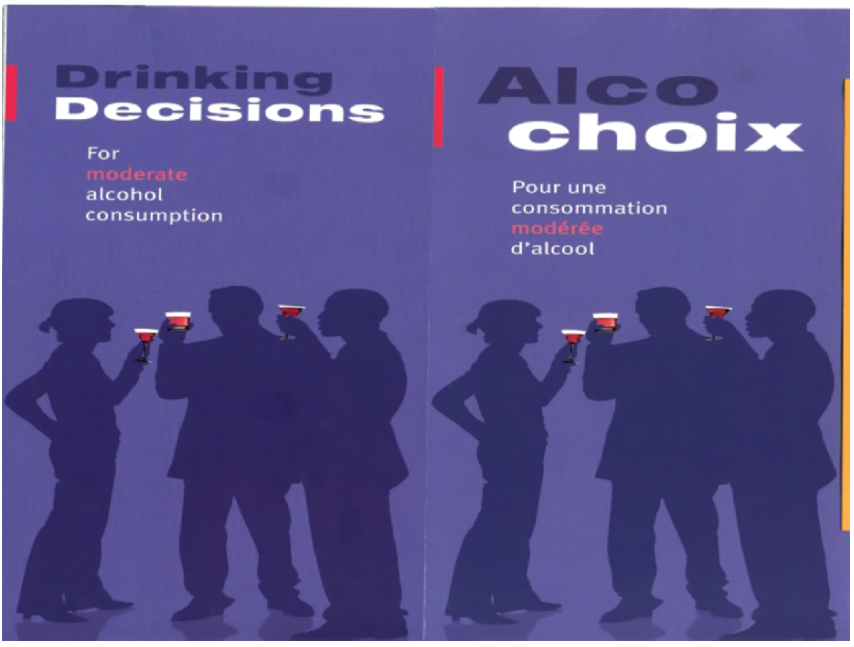


FIGURE 8.1. The tone of an advertisement can make a difference.

After running this ad regularly for slightly more than 2 years, they abandoned it because they had only received 38 registrations. Demonstrating that the tone of a message makes a big difference, they then used Ad 2 in Figure 8.1 and received more than 500 calls over a 5-year period. They concluded the proactive ad was a "huge success" (H. Sacy, Director General, Éduc'alcool, personal communication, October 17, 2003).

In summary, early intervention trials for prevention and harm reduction suggest that it is very important to create a message, and a system for delivering that message, that will be accepted by the intended target audience.

A Community Mail Intervention: Background and Rationale

The Promoting Self-Change (PSC) study, a community based mail intervention funded through the National Institute on Alcohol Abuse and Alcoholism, was conducted in Canada (Sobell, Cunningham, Sobell, et al., 1996). This large-scale community intervention was designed to promote self-change among individuals who were unwilling, not ready, or otherwise unmotivated to access the formal health care system in order to change their drinking. As will be discussed later, while the PSC intervention was designed for problem drinkers, several aspects of the project are relevant to prevention and harm reduction. For example, avenues and procedures that will attract individuals in the general public to consider changing their drinking on their own or with minimal help are likely to be very different from what traditional practices in the alcohol field would suggest. Finally, although the PSC community trial targeted problem drinkers, community interventions have also been successful with cigarette smokers, and therefore, there is every reason to extend and evaluate such trials to individuals with other addictive behaviors.

The PSC intervention represents a convergence of two lines of research. The first involved studies that examined the natural recovery processes with alcohol abusers (Sobell et al., 2001; Sobell, Sobell, Toneatto, & Leo, 1993), and the second involved clinical trials using a Guided Self-Change model of treatment with problem drinkers (Sobell & Sobell, 1993, 1998, 2005). This community-based intervention was designed to take account of three factors found to be associated with heavy drinkers who do not seek treatment or formal help (reviewed in Sobell, Cunningham, Sobell, et al., 1996): (a) stigma or embarrassment of being in treatment for alcohol problems, (b) the desire to change on one's own, and (c) little belief by the general public that self-change is a viable pathway to recovery. The PSC project used several key elements from Guided Self-Change treatment (e.g., Decisional Balance Exercise, Brief Situational Confidence Questionnaire, Timeline Drinking Advice/Feedback; Sobell & Sobell, 1993, 1998) and made them available by mail to individuals in the community who wanted to change their drinking on their own.

The PSC intervention was designed to help problem drinkers analyze their own problems and guide their own change. After the assessment materials were completed and returned by mail, the respondents in the experimental condition were sent a set of personalized feedback materials based on their assessment responses relating to their drinking levels, high-risk situations, and motivation for change (see Appendix A in Sobell, Cunningham, Sobell et al., 1996). Participants assigned to the control group were sent two educational pamphlets available in the community rather than personalized feedback. The sample consists of 825 respondents recruited primarily through newspaper advertisements.

An Empirically Crafted Advertisement

As discussed earlier, when creating a message that will be accepted by the intended target audience (in the present study this was problem drinkers who have never been in treatment and who might be reluctant to seek traditional alcohol treatment services), the message cannot evoke resistance or it will be ignored and thus be ineffective. In this regard, the advertisement for the PSC study contained three messages, all of which were chosen to address issues or concerns we had anticipated in recruiting a group of heavy drinkers who had never accessed the health care system for their drinking. The first line of the ad, "Thinking About Changing Your Drinking?" was chosen because it was felt that this message would not evoke resistance, would prompt people to think about their drinking, and attract the attention of those already thinking about changing. The second line read, "Do you know that 75% of people change their drinking on their own?" This message was chosen because, despite the fact that some Canadian studies (Cunningham, 1999; Sobell, Cunningham, & Sobell, 1996) had shown that over 75% of individuals with an alcohol problem change their drinking without formal treatment or AA (as noted earlier), the general public is still skeptical about the idea that individuals can change on their own (Cunningham et al., 1994, 2007; Cunningham, Sobell, & Chow, 1993; Rush & Allen, 1997). Furthermore, this message clearly puts forth the concept of empowerment (Dickerson, 1998), a message with a proactive approach. The third line, "Call us for free materials you can complete at home" was chosen because, as discussed earlier, one of the major reasons that people have given for not entering treatment was that they wanted to change their drinking on their own (Hingson et al., 1982; Sobell et al., 1993). Thus, the ad made clear that respondents would not need to come to a treatment program. Lastly, the fact that in slightly over a year almost 2,500 people called in response to the ads, suggests that the message was effective in recruiting the target population. A copy of this advertisement appears in Figure 8.2.

Eligible respondents meet the following study criteria: (a) be of legal drinking age (i.e., 19 years old in Ontario, Canada), (b) no prior history of alcohol treatment or self-help such as AA or SMART Recovery (to insure

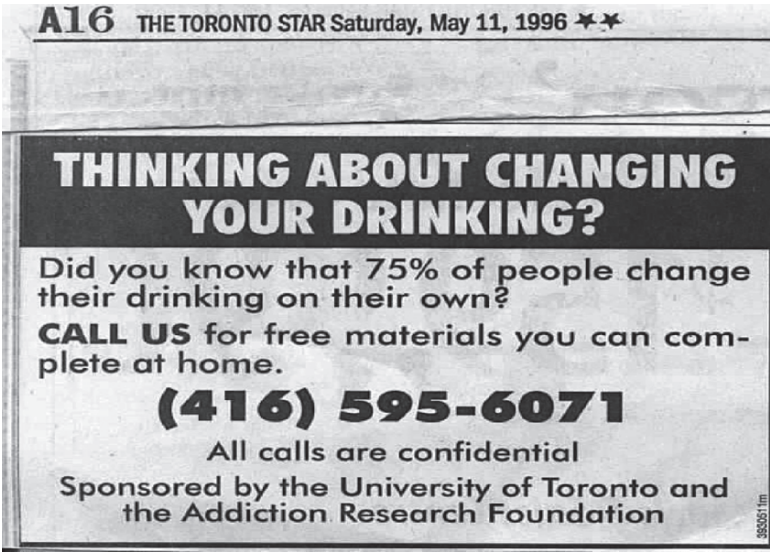


FIGURE 8.2. Promoting self-change study: ad used to recruit participants.

that severely dependent alcohol abusers were not included), and (c) report drinking an average of 12 or more drinks per week or having consumed 5 or more drinks on at least 5 days in the past year. Of the 2,434 individuals who responded to the media solicitations, almost three-quarters (i.e., 72%) met the initial screening criteria and were sent a consent form and assessment materials. The major reasons respondents were ineligible were (a) 90% reported they had previously received some type of treatment or help and (b) 7% were ineligible because of the drinking criteria (i.e., their drinking was not heavy enough to meet the study criteria). Of those meeting the initial screening criteria and mailed the assessment packages, 47% (825) individuals returned their questionnaires and were randomly assigned to one of the two groups. One third of the participants were women and there were no gender differences in terms of the screening criteria.

Eligible participants were randomly assigned to one of two interventions: (a) the Motivational Enhancement/Personalized Feedback (MEPF) condition (n = 414), where individuals received personalized advice/feedback based on their assessment of their drinking and related behaviors or (b) the Bibliotherapy/Drinking Guidelines (BDG) condition (n = 411), where participants received two pamphlets on effects of alcohol and guidelines for low-risk drinking and self-monitoring. The experimental intervention (MEPF) was a motivational intervention. Based on the answers from their assessment materials, respondents were sent personalized feedback and a decisional balance exercise, all intended to enhance their motivation to change (Sobell, Cunningham, Sobell, et al., 1996).

Although the control group (BDG) completed the same questionnaires as those in the experimental group, no personalized feedback was provided until their 12-month follow-up interview was completed. Similar to studies in the smoking field (Becoña & Vazquez, 2001; Brandon, Collins, Juliano, & Lazev, 2000; Curry, McBride, Grothaus, Louie, & Wagner, 1995; Ershoff, Quinn, & Mullen, 1995), BDG respondents were given two self-help pamphlets that were freely available in the local community. These pamphlets provided information about the nature of alcohol abuse, about monitoring one's alcohol use, and general advice on how people could deal with their alcohol problem.

PSC Study Results

Of the original 825 participants in the PSC community trial, 79.6% (657; MEPF = 321, BDG = 336) were located for follow-up, a rate similar to that of other large brief intervention and clinical trials (Babor et al., 1996; Edwards & Rollnick, 1997; Fleming et al., 2002; Grant, Arciniega, Tonigan, Miller, & Meyers, 1997; Project MATCH Research Group, 1998c). As reported previously, significant reductions in drinking from 1 year pre- to 1 year postintervention occurred for both groups, but no significant group differences were found for any drinking variables (Sobell et al., 2002). Thus, it appears that the intervention materials for both groups, irrespective of whether they were personalized, facilitated the reduction of drinking.

What Triggered the Change Process?

Although the results in the community trial were unexpected, the question is why both interventions worked equally well. First, it is possible that those who respond to advertisements are ready to change irrespective of the materials used. In this regard, BDG participants were given two informational self-help pamphlets, one of which instructed them only to self-monitor their drinking and provided explicit guidelines for low-risk drinking. Perhaps participants in this group self-monitored their drinking and consequences and recognized that their drinking exceeded recommended guidelines and self-corrected. In contrast, while those in the MEPF group were not given targets for low risk drinking, they received implicit information about the amount of their drinking as compared with national norms and they were asked what changes they wanted to make to their current alcohol use. While several other possible explanations can be posited for changes in participants' drinking, because we used the Timeline Followback (Sobell & Sobell, 1992) to collect drinking data on a continuous calendar from 1 year prior to the intervention through the assessment, to 1 year postintervention, and because we had the dates when all participants originally called in to the ad, completed their assessment, and were sent the intervention materials, we were able to further evaluate when the changes in drinking behavior might have occurred.

Responding to Advertisements: A Critical Event in Promoting Self-Change

Because both participant groups were equally effective in changing drinking behavior, it was concluded that the motivational materials given to the experimental group had no added benefit beyond the two informational pamphlets given to the control group. Therefore, the key question we wanted to address was what caused changes in drinking? To further explore what might be the critical event behind the significant reduction in drinking for this community sample, three testable hypotheses were examined. The first related to evaluating whether completing the detailed assessment materials might have affected all participants equally strongly such that neither intervention would have an appreciable added effect on changing drinking.

For several years now, there has been speculation in the addiction field that lengthy assessments and follow-up interviews might drive or at least start the change process (Bien et al., 1993; Clifford & Maisto, 2000; Clifford, Maisto, Franzke, Longabaugh, & Beattie, 2000). In this regard, for many years it has long been thought that the intensive assessment in Project MATCH contributed to the lack of treatment results (DiClemente, Carroll, Connors, & Kadden, 1994). Unfortunately, the Project MATCH researchers, as with most researchers in the alcohol field, did not collect detailed data that would allow for tracking when change occurred.

Until recently, little attention has been given to possible changes in drinking behavior due to reactivity. While a handful of studies have started to examine reactive effects due to assessments and follow-up interviews, the results have been mixed. Some studies have provided some indirect evidence that assessments and follow-ups may reduce alcohol use (Chang, Wilkins-Haug, Berman, & Goetz, 1999; Clifford et al., 2000; Connors, Tarbox, & Faillace, 1992; Epstein et al., 2005; McCambridge & Strang, 2005), while others have not (Hester & Delaney, 1997; Maisto, Sobell, Sobell, & Sanders; 1985; Ogborne & Annis, 1988; Stephens, Roffman, & Curtin, 2000; Timko, Moos, Finney, Moos, & Kaplowitz, 1999).

The second testable hypothesis related to whether the decision to respond to the ad or the brief screening interview by phone precipitated changes in drinking. The third hypothesis was that changes in the drinking behavior occurred shortly before participants responded to the ad (i.e., a month preceding the call, perhaps owing to a significant life event). As noted earlier, because this study used the Timeline Followback (Sobell & Sobell, 1992, 2003) to collect daily drinking data for long periods of time before, during, and after the interventions, it was possible to evaluate these hypotheses using the data already collected. Lastly, because there were no significant differences between the two groups or for gender, data for all participants were combined for subsequent analyses.

For all drinking variables, it was found that the major reduction occurred between seeing the advertisement and talking to the interviewer during the brief

telephone screening, but before the assessment materials were received (Sobell et al., 2003; Sobell, Agrawal, Sobell, & Leo, in preparation). There are two possible reasons for why the change occurred at this time: (a) seeing the ad and then waiting for assessment materials could have facilitated change by increasing participants' motivation to change and (b) the brief telephone eligibility screening in response to the ads may have triggered a process of self-evaluation leading to a decision to change (i.e., first line of the ad "Thinking of Changing Your Drinking?" was chosen because it was felt that this message would get people to think about their drinking). Further, both of the above processes could have jointly contributed to the change as well.

Near the end of the study, we became interested in what was attracting callers to the ads. After being screened for the study, 26.1% (458/1,756) of the remaining eligible callers were asked, "When you saw the ad, what about it attracted you, and led you to call us?" Callers who provided more than one reason were asked, "Which one was most important?" Responses from the 458 callers were coded as follows: (a) 31.7% (n = 145) said it was the title of the ad—"Thinking About Changing Your Drinking?", (b) 28.2% (n = 129) said it was the statement that "Did you know that 75% of people change their drinking on their own?", (c) 12.0% (n = 55) said they wanted to change at home and did not want to come in to treatment, (d) 9.8% (n = 45) said they just "saw the ad and called," (e) 9.2% (n = 42) gave other reasons, (f) 4.4% (n = 20) said it was the "sponsorship by the University of Toronto/Addiction Research Foundation," (g) 1.7% (n = 8) said it was because we offered "free materials," (h) 1.7% (n = 8) said it was because we promised "All calls are confidential," and (i) 1.3% (n = 6) said it was because it was "not AA." Two very distinct statements in the ads (thinking of changing your drinking and learning that the vast majority, 75%, of people with alcohol problems change on their own) were reported by 60% of callers as the reasons they had been attracted to the ad.

Finally, at the end of the 1-year follow-up, each participant was asked to indicate the most helpful parts of the program from a list. A year after the intervention, participants rated the following as the most helpful aspect of the program: (a) Seeing the ad and deciding to call: 45.0% (195/433), (b) Completing the initial questionnaire about my drinking, related consequences, and confidence: 23.1% (100/433), (c) Reading the program materials: 19.0% (82/433), (d) Making the call and talking to the interviewer: 6.9% (30/433), (e) Follow-up reminder letters: 3.5% (15/433), (f) Having the program materials to look over: 1.4% (6/433), and (g) Other: 1.2% (5/433), Thus, 1 year after the intervention, close to one-half of all participants felt that seeing the ad and deciding to call was the most helpful aspect of the program. This is particularly interesting given that 60% of participants after being screened into the study, when asked to name the most important thing that attracted them to the advertisements said that it was one of two statements ("thinking about changing your drinking" or "75% of people change … on their own").

Smoking cessation research may help explain the results of the PSC study. Despite the fact that major organizations like the American Lung Association, American Cancer Society, U.S. Surgeon General, and American Psychiatric Association recommend that smokers set a quit date (American Lung Association, 2007; Fisher, 1998; Hughes et al., 1996; U.S. Department of Health and Human Services, 2000), until recently, little has been known about planned versus unplanned quit attempts (Larabie, 2005). Two very recent studies (Larabie, 2005; West & Sohal, 2006) found that close to one half of smokers' quit attempts were unplanned, and that the unplanned attempts were more successful than the planned attempts (West & Sohal, 2006). To explain how this may have happened, West and Sohal (2006) use catastrophe theory, a branch of mathematics that suggests that tensions develop in systems such that "even small triggers can lead to sudden 'catastrophic' changes" (p. 8). For smokers, West and Sohal propose "that beliefs, past experiences, and the current situation create varying levels of 'motivational tension'" (p. 8), where small triggers can change a motivational state (i.e., smoking cessation that was not planned prior to the trigger). Using such reasoning, one possible explanation for why PSC participants changed their drinking behavior when they saw the ad is that while they had been thinking about changing their drinking (motivational tension), like many people in the general public they did not know or believe that problem drinkers do not have to enter treatment in order to change. Thus, seeing the ad functioned as a catalyst (i.e., trigger) to implement a self-change process.

In conclusion, the findings from the PSC study strongly suggest that the change mechanism that prompted participants to respond to the study, and, according to their reports, may have led them to change their drinking behavior relates to some aspect of the wording of the advertisement. If future research confirms that advertisements motivate people to change their drinking, such low cost, low intensity interventions could have broad public health applicability.

Public Health Implications of Community Interventions

Regardless of how the changes in drinking were achieved, it is clear that a large-scale intervention can produce substantial benefits with little cost. The present community-level mail intervention is consistent with an efficient approach to improving public health where individuals are first provided with an intervention that is minimally intrusive on their lifestyle, yet has a reasonable chance of success (Sobell & Sobell, 2000). The present findings suggest that a low-cost population-level approach has the opportunity of reaching large numbers of individuals who are otherwise unwilling, not ready, or not motivated to access the formal health care system. If such an approach was widely used, it could generate enormous health and related benefits. In this regard, it was estimated recently that the cost savings of screening and brief interventions introduced as part of the new Medicaid codes could result in a

net savings of $520 million annually for the federal government (Medscape Medical News, 2006). A population approach to alcohol problems, however, would represent a shift from the alcohol field's longstanding clinical focus to a broader public health perspective.

Given the positive results for both groups, it is reasonable to speculate that the change in participants' behavior occurred earlier than would have happened without the intervention, and therefore the anticipated costs of these participants' alcohol problems to society were reduced. For those for whom the intervention does not work, the level of care can be stepped up (i.e., more treatment or an alternative treatment). In this regard, close to one-quarter of the participants who were located for the 1-year follow-up reported they had their first help-seeking experience during that follow-up year (Sobell et al., 2002). This finding suggests that individuals whose problems were not resolved through the current self-help mail intervention and who felt they needed more help engaged in their own stepped care by seeking help rather than letting their problem worsen. The public health implications of interventions like the one reported here have been succinctly articulated in an article by Humphreys and Tucker (2002) who have called for more responsive and effective intervention systems for alcohol-related problems. In arguing that "[a]lcohol intervention systems are often unresponsive to the full range of problems, resources, treatment preferences, goals, motivations and behavior-change pathways with the affected population" (p. 127), they assert that "systems should enhance the accessibility, appeal and diversity of services" (p. 128). Lastly, they suggest four avenues by which this can be accomplished: (a) not only should interventions be targeted at drinkers with less serious alcohol problems, but they should also be disseminated more broadly, including through nonspecialty health care and community settings, (b) although untested, Telehealth services could reach a large percentage of problem drinkers who have not accessed the formal health care system (American Psychological Association, 2000; Jerome et al., 2000), (c) rather than waiting for individuals to cross the clinical threshold, wider, more active, and novel approaches for getting individuals to consider looking at their alcohol use are needed, and (d) receipt of services should be more rapid, address the person's concerns, be more flexible (e.g., goal choice), and meet people where they are on the readiness-to-change continuum. This radical shift in thinking, viewing alcohol problems as a public health issue, while new to many in the alcohol field, was advocated by the Institute of Medicine over a decade ago (Institute of Medicine, 1990). The findings from the PSC study strongly suggest that such an approach is feasible. Another example of successfully addressing alcohol problems from a public health approach comes from results of the first annual National Alcohol Screening Day in 1999 (Greenfield et al., 2003). At the 1,089 sites, 18,043 were screened, 5,595 were referred for treatment, and of those screened only 13% had reported previous alcohol treatment.

Conclusion and Future Directions

Prevention and early intervention strategies need to be developed that are perceived as attractive and are sought out rather than avoided. Despite the considerable cost to society of substance use and related problems, many individuals whose substance use might place them at risk have not experienced any consequences and do not consider their use as a problem. The Prompting Self-Change intervention described in this chapter was designed to appeal to such individuals. In fact, this intervention is consistent with an efficient approach to public health care where individuals are first provided with an intervention that is least intrusive on their lifestyle yet has a reasonable chance of success (Sobell et al., 2002; Sobell & Sobell, 1999). This and similar approaches have the opportunity of reaching large numbers of individuals who are otherwise unwilling, not ready, or not motivated to access the formal health care system. If such interventions succeed, it is reasonable to speculate that the change in respondents' behavior will have occurred earlier than would otherwise be expected, and therefore that the anticipated costs of these individuals' substance use problems to society will be reduced. If the initial intervention does not work, then the level of care can be stepped up (i.e., more treatment or an alternative treatment). Moreover, if interventions like the one just described are successful, they could then be employed and evaluated in a number of other settings (e.g., health care clinics, high schools and colleges, military bases) and with a variety of addictive behaviors (e.g., drug use, gambling).

Lastly, it is very clear that additional research is critically needed to examine different mechanisms of change beyond treatment effects. Until then, reactivity of any type will confound results and limit the interpretation of findings.

References

Alemi, F., Mosavel, M., Stephens, R. C., Ghadiri, A., Krishnaswamy, J., & Thakkar, H. (1996). Electronic self-help and support groups. *Medical Care, 34*(10 Suppl.), 32–44.

American Lung Association. (2007, January 11). Plan your quit day. Ready to quit? Here are 4 steps to a smoke-free future (Retrieved January 11, 2007, from http://www.cancer.org/docroot/PED/content/PED_10_7_Committing_To_Quit.asp

American Psychological Association. (2000, April). Psychology and the Internet. *Monitor on Psychology, 31*, 1–136.

Apodaca, T. R., & Miller, W. R. (2003). A meta-analysis of the effectiveness of bibliotherapy for alcohol problems. *Journal of Consulting and Clinical Psychology, 59*, 289–304.

Babor, T. F., Acuda, W., Campillo, C., Del Boca, F. K., Grant, M., Hodgson, R., et al. (1996). A cross-national trial of brief interventions with heavy drinkers. *American Journal of Public Health, 86*, 948–955.

Becoña, E., & Vazquez, F. L. (2001). Effectiveness of personalized written feedback through a mail intervention for smoking cessation: A randomized-controlled trial in Spanish smokers. *Journal of Consulting and Clinical Psychology, 69*, 33–40.

Bien, T. H., Miller, W. R., & Tonigan, J. S. (1993). Brief interventions for alcohol problems: A review. *Addiction, 88*, 315–336.

Brandon, T. H., Collins, B. N., Juliano, L. M., & Lazev, A. B. (2000). Preventing relapse among former smokers: A comparison of minimal interventions through telephone and mail. *Journal of Consulting and Clinical Psychology, 68*, 103–113.

Breslin, C., Sobell, L. C., Sobell, M. B., Buchan, G., & Kwan, E. (1996). Aftercare telephone contacts with problem drinkers can serve a clinical and research function. *Addiction, 91*, 1359–1364.

Campion, P., Owen, L., Mcneill, A., & Mcguire, C. (1994). Evaluation of a mass media campaign on smoking and pregnancy. *Addiction, 89*, 1245–1254.

Chang, G., Wilkins-Haug, L., Berman, S., & Goetz, M. A. (1999). Brief intervention for alcohol use in pregnancy: A randomized trial. *Addiction, 94*, 1499–1508.

Chiauzzi, E. J., & Liljegren, S. (1993). Taboo topics in addiction treatment: An empirical review of clinical folklore. *Journal of Substance Abuse Treatment, 10*, 303–316.

Clifford, P. R., & Maisto, S. A. (2000). Subject reactivity effects and alcohol treatment outcome research. *Journal of Studies on Alcohol, 61*, 787–793.

Clifford, P. R., Maisto, S. A., Franzke, L. H., Longabaugh, R., & Beattie, M. C. (2000). Alcohol treatment research follow-up interviews and drinking behaviors. *Journal of Studies on Alcohol, 61*, 736–743.

Connors, G. J., Tarbox, A. R., & Faillace, L. A. (1992). Achieving and maintaining gains among problem drinkers: Process and outcome results. *Behavior Therapy, 23*, 449–474.

Copeland, J. (1997). A qualitative study of barriers to formal treatment among women who self-managed change in addictive behaviours. *Journal of Substance Abuse Treatment, 14*, 183–190.

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59*, 614–625.

Cunningham, J. A. (1999). Resolving alcohol-related problems with and without treatment: The effects of different problem criteria. *Journal of Studies on Alcohol, 60*, 463–466.

Cunningham, J. A., Blomqvist, J., & Cordingley, J. (2007). Beliefs about drinking problems: Results from a general population telephone survey. *Addictive Behaviors, 32*, 166–169.

Cunningham, J. A., Sobell, L. C., & Chow, V. M. C. (1993). What's in a label? The effects of substance types and labels on treatment considerations and stigma. *Journal of Studies on Alcohol, 54*, 693–699.

Cunningham, J. A., Sobell, L. C., & Freedman, J. L. (1994). Beliefs about the cause of substance abuse: A comparison of three drugs. *Journal of Substance Abuse, 6*, 219–226.

Cunningham, J. A., Sobell, L. C., & Sobell, M. B. (1998). Awareness of self-change as a pathway to recovery for alcohol abusers: Results from five different groups. *Addictive Behaviors, 23*, 399–404.

Cunningham, J. A., Sobell, L. C., Sobell, M. B., Agrawal, S., & Toneatto, T. (1993). Barriers to treatment: Why alcohol and drug abusers delay or never seek treatment. *Addictive Behaviors, 18*, 347–353.

Curry, S. J., McBride, C., Grothaus, L. C., Louie, D., & Wagner, E. H. (1995). A randomized trial of self-help materials, personalized feedback, and telephone counseling with nonvolunteer smokers. *Journal of Consulting and Clinical Psychology, 63*, 1005–1014.

Davison, G. C. (2000). Stepped care: Doing more with less? *Journal of Consulting and Clinical Psychology, 68*, 580–585.

Dawson, D. A., Grant, B. F., & Li, T.-K. (2005). Quantifying the risks associated with exceeding recommended drinking limits. *Alcoholism: Clinical and Experimental Research, 29*, 902–908.

Dawson, D. A., Grant, B. F., Stinson, F. S., Chou, P. S., Huang, B., & Ruan, W. J. (2005). Recovery from DSM-IV alcohol dependence: United States, 2001–2002. *Addiction, 100*, 281–292.

Dickerson, F. B. (1998). Strategies that foster empowerment. *Cognitive and Behavioral Practice, 5*, 255–275.

DiClemente, C. C., Carroll, K. M., Connors, G. J., & Kadden, R. M. (1994). Process assessment in treatment matching research. *Journal of Studies on Alcohol, Suppl. 12*, 156–162.

Edwards, A. G. K., & Rollnick, S. (1997). Outcome studies of brief alcohol intervention in general practice: The problem of lost subjects. *Addiction, 92*, 1699–1704.

Epstein, E. E., Drapkin, M. L., Yusko, D. A., Cook, S. M., McCrady, B. S., & Jensen, N. K. (2005). Is alcohol assessment therapeutic? Pretreatment change in drinking among alcohol-dependent women. *Journal of Studies on Alcohol, 66*, 369–378.

Ershoff, D. H., Quinn, V. P., & Mullen, P. D. (1995). Relapse prevention among women who stop smoking early in pregnancy: A randomized clinical trial of a self-help intervention. *American Journal of Preventive Medicine, 11*, 178–184.

Ferris, J. (1994, June). *Comparison of public perceptions of alcohol, drug, and other tobacco addictions—moral vs. disease models*. Paper presented at the 20th Annual Alcohol Epidemiology Symposium, Ruschlikon, Switzerland.

Fisher, E. B. (1998). *American Lung Association 7 steps to a smoke-free life* (Paperback). New York: Wiley.

Fleming, M., & Manwell, L. B. (1999). Brief intervention in primary care settings: A primary treatment method for at-risk, problem, and dependent drinkers. *Alcohol Health & Research World, 23*, 128–137.

Fleming, M. F., Mundt, M. P., French, M. T., Manwell, B., Stauffacher, E. A., & Barry, K. L. (2000). Benefit-cost analysis of brief physician advice with problem drinkers in primary care settings. *Medical Care, 38*, 7–18.

Fleming, M. F., Mundt, M. P., French, M. T., Manwell, L. B., Stauffacher, E. A., & Barry, K. L. (2002). Brief physician advice for problem alcohol drinkers: Long-term efficacy and benefit-cost analysis. *Alcoholism: Clinical and Experimental Research, 26*, 36–43.

Foulds, J., & Jarvis, M. J. (1995). Smoking cessation and prevention. In P. Calverley & N. Pride (Eds.), *Chronic obstructive pulmonary disease* (pp. 373–390). London: Chapman & Hall.

Giffen, C. A. (1991). Community intervention trial for smoking cessation (COMMIT): Summary of design and intervention. *Journal of the National Cancer Institute, 83*, 1620–1628.

Grant, B. F. (1997). Barriers to alcoholism treatment: Reasons for not seeking treatment in a general population sample. *Journal of Studies on Alcohol, 58*, 365–371.

Grant, K. A., Arciniega, L. T., Tonigan, J. S., Miller, W. R., & Meyers, R. J. (1997). Are reconstructed self-reports of drinking reliable? *Addiction, 92*, 601–606.

Greenfield, S. F., Keliher, A., Sugarman, D., Kozloff, R., Reizes, J. M., Kopans, B., et al. (2003). Who comes to voluntary, community-based alcohol screening? Results of the first annual National Alcohol Screening Day, 1999. *American Journal of Psychiatry, 160*, 1677–1683.

Hanna, E. Z., Chou, S. P., & Grant, B. F. (1997). Relationship between drinking and heart disease morbidity in the United States: Results from the National Health Interview Survey. *Alcoholism: Clinical and Experimental Research, 21*, 111–118.

Harris, K. M., & Mckellar, J. D. (2003, June). Demand for alcohol treatment. *Frontlines: Linking Alcohol Services Research and Practices*, 1–8.

Heather, N. (1989). Psychology and brief interventions. *British Journal of Addiction, 84*, 357–370.

Heather, N. (1994). Brief interventions on the world map. *Addiction, 89*, 665–667.

Heather, N., Rollnick, S., Bell, A., & Richmond, R. (1996). Effects of brief counselling among male heavy drinkers identified on general hospital wards. *Drug and Alcohol Review, 15*, 29–38.

Hester, R. K., & Delaney, H. D. (1997). Behavioral self-control program for Windows: Results of a controlled clinical trial. *Journal of Consulting and Clinical Psychology, 65*, 686–693.

Hingson, R., Mangione, T., Meyers, A., & Scotch, N. (1982). Seeking help for drinking problems: A study in the Boston metropolitan area. *Journal of Studies on Alcohol, 43*, 273–288.

Hughes, J. R., Cummings, K. M., & Hyland, A. (1999). Ability of smokers to reduce their smoking and its association with future smoking cessation. *Addiction, 94*, 109–114.

Hughes, J. R., Fiester, S., Goldstein, M., Resnick, M., Rock, N., Ziedonis, D., et al. (1996). Practice guidelines for the treatment of patients with nicotine dependence. *American Journal of Psychiatry, 153*(10 Suppl.), 1–31.

Humphreys, K., & Tucker, J. A. (2002). Toward more responsive and effective intervention systems for alcohol-related problems: Introduction. *Addiction, 97*, 126–132.

Institute of Medicine. (1990). *Broadening the base of treatment for alcohol problems*. Washington, DC: National Academy Press.

Jeffery, R. W., Hellerstedt, W. L., & Schmid, T. L. (1990). Correspondence programs for smoking cessation and weight control: A comparison of two strategies in the Minnesota Heart Health Program. *Health Psychology, 9*, 585–598.

Jerome, L. W., DeLeon, P. H., James, L. C., Folen, R., Earles, J., & Gedney, J. J. (2000). The coming of age of telecommunications in psychological research and practice. *American Psychologist, 55*, 407–421.

Killen, J. D., Fortmann, S. P., Newman, B., & Varady, A. (1990). Evaluation of a treatment approach combining nicotine gum with self-guided behavioral treatments for smoking relapse prevention. *Journal of Consulting and Clinical Psychology, 58*, 85–92.

Klingemann, H. K. H. (1991). The motivation for change from problem alcohol and heroin use. *British Journal of Addiction, 86*, 727–744.

Lando, H. A., Rollnick, S., Klevan, D., Roski, J., Cherney, L., & Lauger, G. (1997). Telephone support as an adjunct to transdermal nicotine in smoking cessation. *American Journal of Public Health, 87*, 1670–1674.

Larabie, L. C. (2005). To what extent do smokers plan quit attempts? *Tobacco Control, 14*, 425–428.

Lichtenstein, E., Lando, H. A., & Nothwehr, F. (1994). Readiness to quit as a predictor of smoking changes in the Minnesota Heart Health Program. *Health Psychology, 13*, 393–396.

Mahoney, M. J., & Lyddon, W. J. (1988). Recent developments in cognitive approaches to counseling and psychotherapy. *The Counseling Psychologist, 16*, 190–234.

Maisto, S. A., Sobell, L. C., Sobell, M. B., & Sanders, B. (1985). Effects of outpatient treatment for problem drinkers. *American Journal of Drug and Alcohol Abuse, 11*, 131–149.

McCambridge, J., & Strang, J. (2005). Deterioration over time in effect of motivational interviewing in reducing drug consumption and related risk among young people. *Addiction, 100*, 470–478.

Medscape Medical News. (2006, September). Medicaid will reimburse for alcohol, drug screening and brief intervention. Retrieved December 17, 2006, from http://www.medscape.com/viewarticle/544548?sssdmh=dm1.217591&src=top10To

Miller, W. R., Brown, J. M., Simpson, T. L., Handmaker, N. S., Bien, T. H., Luckie, L. F., et al. (1995). What works? A methodological analysis of the alcohol treatment outcome literature. In R. K. Hester & W. R. Miller (Eds.), *Handbook of alcoholism treatment approaches: Effective alternatives* (2nd ed., pp. 12–44). Boston: Allyn & Bacon.

Miller, W. R., & Hester, R. K. (1980). Treating the problem drinker: Modern approaches. In W. R. Miller (Ed.), *The addictive behaviors: Treatment of alcoholism, drug abuse, smoking and obesity* (pp. 11–141). New York: Pergamon Press.

Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people to change* (2nd ed.). New York: Guilford Press.

Miller, W. R., Sovereign, R. G., & Krege, B. (1988). Motivational interviewing with problem drinkers: II. The drinker's check-up as a preventive intervention. *Behavioural Psychotherapy, 16*, 251–268.

Miller, W. R., Taylor, C. A., & West, J. C. (1980). Focused versus broad–spectrum behavior therapy for problem drinkers. *Journal of Consulting and Clinical Psychology, 48*, 590–601.

Moyer, A., Finney, J. W., Swearingen, C. E., & Vergun, P. (2002). Brief interventions for alcohol problems: A meta-analytic review of controlled investigations in treatment-seeking and non-treatment-seeking populations. *Addiction, 97*, 279–292.

Nadeau, L. (1997, October). *The promotion of low-risk drinking styles: Sensitizing the public. A critical overview*. Paper presented at the symposium on "The promotion of low-risk drinking patterns in the general public: Strategies and messages," Zurich, Switzerland.

National Institute on Alcohol Abuse and Alcoholism. (1995). *The physician's guide to helping patients with alcohol problems*. Washington, DC: U.S. Government Printing Office.

National Institute on Alcohol Abuse and Alcoholism. (2007). *Helping patients who drink too much: A clinician's guide* (updated 2005 edition). Washington, DC: U.S. Government Printing Office.

Ogborne, A. C., & Annis, H. M. (1988). The reactive effects of follow-up assessment procedures: An experimental study. *Addictive Behaviors, 13*, 123–129.

Pearlman, S., Zweben, A., & Li, S. (1989). The comparability of solicited versus clinic subjects in alcohol treatment research. *British Journal of Addiction, 84*, 523–532.

Perloff, R. M. (1993). *The dynamics of persuasion*. Hillsdale, NJ: Lawrence Erlbaum.

Pirie, P. L., Rooney, B. L., Pechacek, T. F., Lando, H. A., & Schmid, L. A. (1997). Incorporating social support into a community-wide smoking cessation contest. *Addictive Behaviors, 2*, 131–137.

Project MATCH Research Group. (1998a). Matching alcoholism treatments to client heterogeneity: Project MATCH three-year drinking outcomes. *Alcoholism: Clinical and Experimental Research, 22*, 1300–1311.

Project MATCH Research Group. (1998b). Matching alcoholism treatments to client heterogeneity: Treatment main effects and matching effects on drinking during treatment. *Journal of Studies on Alcohol, 59*, 631–639.

Project MATCH Research Group. (1998c). Therapist effects in three treatments for alcohol problems. *Psychotherapy Research, 8*, 455–474.

Raimo, E. B., Daeppen, J. B., Smith, T. L., Danko, G. P., & Schuckit, M. A. (1999). Clinical characteristics of alcoholism in alcohol-dependent subjects with and without a history of alcohol treatment [comment]. *Alcoholism: Clinical & Experimental Research, 23*, 1605–1613.

Ramelson, H. Z., Friedman, R. H., & Ockene, J. K. (1999). An automated telephone-based smoking cessation education and counseling system. *Patient Education and Counseling, 36*, 131–144.

Rehm, J. (1997, October). *Campaigns and core messages: An up-to-date and state of the art from a research perspective?* Paper presented at the symposium on "The promotion of low-risk drinking patterns in the general public: Strategies and messages," Zurich, Switzerland.

Roizen, R. (1977). *Barriers to alcoholism treatment*. Berkeley, CA: Alcohol Research Group.

Rush, B., & Allen, B. A. (1997). Attitudes and beliefs of the general public about treatment for alcohol problems. *Canadian Journal of Public Health, 88*, 41–43.

Saunders, J. B., Kypri, K., Walters, S. T., Laforge, R. G., & Larimer, M. E. (2004). Approaches to brief intervention for hazardous drinking in young people. *Alcoholism: Clinical and Experimental Research, 28*, 322–329.

Shaffer, H. J., & Jones, S. B. (1989). *Quitting cocaine: The struggle against impulse*. Lexington, MA: Lexington Books.

Sitharthan, T., Kavanagh, D. J., & Sayer, G. (1996). Moderating drinking by correspondence: An evaluation of a new method of intervention. *Addiction, 91*, 345–355.

Sobell, L. C., Agrawal, S., Sobell, M. B., and Leo, G. I. (in preparation). *Responding to an advertisement: A critical event in promoting self-change of drinking behavior*.

Sobell, L. C., Agrawal, S., Sobell, M. B., Leo, G. I., Cunningham, J. A., Young, L. J., et al. (2003, November). *Responding to an advertisement: A critical event in promoting self-change of drinking behavior*. Poster presented at the 37th Annual Meeting of the Association for Advancement of Behavior Therapy, Boston.

Sobell, L. C., Cunningham, J. A., & Sobell, M. B. (1996). Recovery from alcohol problems with and without treatment: Prevalence in two population surveys. *American Journal of Public Health, 86*, 966–972.

Sobell, L. C., Cunningham, J. A., Sobell, M. B., Agrawal, S., Gavin, D. R., Leo, G. I., et al. (1996). Fostering self-change among problem drinkers: A proactive community intervention. *Addictive Behaviors, 21*, 817–833.

Sobell, L. C., Klingemann, H., Toneatto, T., Sobell, M. B., Agrawal, S., & Leo, G. I. (2001). Alcohol and drug abusers' perceived reasons for self-change in Canada and Switzerland: Computer-assisted content analysis. *Substance Use and Misuse, 36*, 1467–1500.

Sobell, L. C., & Sobell, M. B. (1992). Timeline Followback: A technique for assessing self-reported alcohol consumption. In R. Z. Litten & J. Allen (Eds.), *Measuring alcohol consumption: Psychosocial and biological methods* (pp. 41–72). Totowa, NJ: Humana Press.

Sobell, L. C., & Sobell, M. B. (2003). Alcohol consumption measures. In J. P. Allen & V. Wilson (Eds.), *Assessing alcohol problems* (2nd ed., pp. 78–99). Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.

Sobell, L. C., Sobell, M. B., Leo, G. I., Agrawal, S., Johnson-Young, L., & Cunningham, J. A. (2002). Promoting self-change with alcohol abusers: A community-level mail intervention based on natural recovery studies. *Alcoholism: Clinical and Experimental Research, 26*, 936–948.

Sobell, L. C., Sobell, M. B., & Toneatto, T. (1992). Recovery from alcohol problems without treatment. In N. Heather, W. R. Miller, & J. Greeley (Eds.), *Self-control and the addictive behaviours* (pp. 198–242). New York: Maxwell MacMillan.

Sobell, L. C., Sobell, M. B., Toneatto, T., & Leo, G. I. (1993). What triggers the resolution of alcohol problems without treatment? *Alcoholism: Clinical and Experimental Research, 17*, 217–224.

Sobell, M. B., Breslin, F. C., & Sobell, L. C. (1998). Project MATCH: The time has come … to talk of many things. *Journal of Studies on Alcohol, 59*, 124–125.

Sobell, M. B., & Sobell, L. C. (1993). *Problem drinkers: Guided self-change treatment*. New York: Guilford Press.

Sobell, M. B., & Sobell, L. C. (1998). Guiding self-change. In W. R. Miller & N. Heather (Eds.), *Treating addictive behaviors* (2nd ed., pp. 189–202). New York: Plenum Press.

Sobell, M. B., & Sobell, L. C. (1999). Stepped-care for alcohol problems: An efficient method for planning and delivering clinical services. In J. A. Tucker, D. A. Donovan, & G. A. Marlatt (Eds.), *Changing addictive behavior: Bridging clinical and public health strategies* (pp. 331–343). New York: Guilford Press.

Sobell, M. B., & Sobell, L. C. (2000). Stepped-care as a heuristic approach to the treatment of alcohol problems. *Journal of Consulting and Clinical Psychology, 68*, 573–579.

Sobell, M. B., & Sobell, L. C. (2005). Guided self-change treatment for substance abusers. *Journal of Cognitive Psychotherapy, 19*, 199–210.

Stephens, R. S., Roffman, R. A., & Curtin, L. (2000). Comparison of extended versus brief treatments for marijuana use. *Journal of Consulting and Clinical Psychology, 68*, 898–908.

Substance Abuse and Mental Health Administration. (2002). *Enhancing motivation for change in substance abuse treatment* (Treatment Improvement Protocol Series, TIPS #35). Rockville, MD: U.S. Department of Health and Human Services.

Substance Abuse and Mental Health Administration. (2003). *Reasons for not receiving treatment among adults with serious mental illness* (Vol. 2003). Rockville, MD: U.S. Department of Health and Human Services.

Svärdsudd, K. (1998). Moderate alcohol consumption and cardiovascular disease: Is there evidence for a preventive effect? *Alcoholism: Clinical and Experimental Research, 22*, 307S–314S.

Thom, B. (1986). Sex differences in help-seeking for alcohol problems—1. The barriers to help-seeking. *British Journal of Addiction, 81*, 777–788.

Thoresen, C. E., & Mahoney, M. J. (1974). *Behavioral self-control*. New York: Rinehart & Winston.

Timko, C., Moos, R. H., Finney, J. W., Moos, B., & Kaplowitz, M. S. (1999). Long-term treatment careers and outcomes of previously untreated alcoholics. *Journal of Studies on Alcohol, 60*, 437–447.

Tuchfeld, B. S. (1981). Spontaneous remission in alcoholics: Empirical observations and theoretical implications. *Journal of Studies on Alcohol, 42*, 626–641.

U.S. Department of Health and Human Services. (2000, June). You Can Quit Smoking. Consumer Guide. http://www.surgeongeneral.gov/tobacco/consquits.htm

Utz, S. W., Shuster, G. F., Merwin, E., & Williams, B. (1994). A community-based smoking-cessation program: Self-care behaviors and success. *Public Health Nursing, 11*, 291–299.

Warner, K. E. (1981). Cigarette smoking in the 1970's: The impact of the antismoking campaign on consumption. *Science, 211*, 729–730.

Warner, K. E. (1989). Effects of the antismoking campaign: An update. *American Journal of Public Health, 79*, 144–151.

Werch, C. E. (1990). Are drinkers interested in inexpensive approaches to reduce their alcohol use? *Journal of Drug Education, 20*, 67–75.

West, R., & Sohal, T. (2006). "Catastrophic" pathways to smoking cessation: Findings from national survey. *British Medical Journal, 332*, 458–460. Originally published online 27 January 2006; doi:10.1136/bmj.38723.573866.AE.

Wright, B., Williams, C., & Partridge, I. (1999). Management advice for children with chronic fatigue syndrome: A systematic study of information from the Internet. *Irish Journal of Psychological Medicine, 16*, 67–71.

Wutzke, S. E., Shiell, A., Gomel, M. K., & Conigrave, K. M. (2001). Cost effectiveness of brief interventions for reducing alcohol consumption. *Social Science & Medicine, 52*, 863–870.

Zhu, S. H., Stretch, V., Balabanis, M., Rosbrook, B., Sadler, G., & Pierce, J. P. (1996). Telephone counseling for smoking cessation: Effects of single-session and multiple-session interventions. *Journal of Consulting and Clinical Psychology, 64*, 202–211.