

ARTICLE

A Group Motivational Treatment for Chemical Dependency

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Abstract—Patient “motivation” has been implicated as a critical component in addiction treatment outcomes. To date, treatments utilizing motivational elements have been conducted as individual interventions. We describe the development of a Group Motivational Intervention (GMI), a four-session, manual-driven group approach that employs key hypothesized motivational elements. These include the six motivational elements derived by Miller and Sanchez (1994) from successful alcoholism treatments, described with the acronym, FRAMES (feedback, responsibility, advice, menu of options, empathy, and self-efficacy). GMI is additionally informed by concepts derived from “self-determination theory” (Deci & Ryan, 1985), concerned with understanding motivation as either internal/autonomous or external/controlled. Evidence indicates that people will value and persist longer in behaviors that they perceive as autonomously motivated. GMI techniques utilize the interpersonal factors found to be autonomy-supportive in self-determination theory. Preliminary results from a randomized clinical trial suggest that key motivational processes are affected by GMI: patients perceive the GMI environment and group leader as significantly more “autonomy supportive” than treatment “as usual.” © 1999 Elsevier Science Inc. All rights reserved.

Keywords—autonomous motivation; chemical dependence; FRAMES; group motivational treatment; self-determination theory.

INTRODUCTION

THERE IS AMPLE evidence that a range of chemical dependency treatments lead to significant reductions in use, improved physical and mental health, and increased social productivity (e.g., Bien, Miller, & Tonigan 1993;

Cross, Morgan, Mooney, Martin, & Rafter, 1990; Institute of Medicine 1990; McKay, Murphy, & Longabaugh, 1991; McLellan, Luborsky, Woody, & O'Brien, 1982; Miller, & Brown, 1997; Miller et al., 1995; Moos, Finney, & Cronkite, 1990; Project MATCH Research Group, 1997). Unfortunately, the treatment field also continues to contend with the problems of poor patient retention and relapse. In both alcohol and drug treatment populations, an average of about one third, and at best one half, of people who start an outpatient chemical dependency program will complete it (Pekarik & Zimmer, 1992; Mammo & Weinbaum, 1993; Wickizer et al., 1994). Further, research reviews and key studies indicate relapse rates in treated populations ranging between 50 and 93% in a 1- to 3-year follow-up period (Ball & Ross, 1991; Emrick, 1975; Helzer et al., 1985; Hoffman &

The authors wish to acknowledge the support of the Smithers Center staff, in particular John Taylor, Pat Baldwin, Deanna Billington, Brook Hersey, Ann Geller, Gerald Horowitz, and Paul Rinaldi, as well as the volunteer research assistants who made the project possible.

GMI training and treatment materials available upon request from the first author.

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Harrison, 1986; Miller & Hester, 1980; Rohan, 1970; Vaillant, 1983).

Patient "motivation," variously defined, often has been implicated by research as a critical component in treatment outcomes (Baekeland & Lundwall, 1975; DeLeon & Jainchill, 1986; Miller, 1985; Prochaska, DiClemente, & Norcross, 1992; Simpson & Joe, 1993). Certainly this is also the prevailing opinion among clinicians. In alcoholism treatment, several interventions aimed at shifting motivation for change have demonstrated efficacy as brief, free-standing treatments (Bien et al., 1993; Miller, 1985; Miller & Rollnick, 1991; Miller & Sanchez, 1994), including the Motivational Enhancement Therapy (MET) employed as one of the primary interventions in a recent National Institute of Alcohol Abuse and Alcoholism-sponsored treatment matching study (Project MATCH Research Group, 1997).

Miller and Sanchez (1994) reviewed interventions in the alcoholism field and derived six common motivational elements from empirically tested successful treatments, which they described with the acronym FRAMES (feedback, responsibility, advice, menu of options, empathy, and self-efficacy). These elements are: use of objective *feedback*, stressing of client *responsibility*, use of therapist objective *advice*, offering clients a *menu* of options, use of *empathy*, and fostering *self-efficacy*. To date, motivational treatments that utilize these elements have been conducted as individual interventions, most notably within a specific approach termed Motivational Interviewing (MI) (Miller & Rollnick, 1991).

This article describes our work to extend the development of such promising individual motivational approaches to a new Group Motivational Intervention (GMI). GMI is a brief (four sessions), manual-driven small group approach that utilizes key motivational elements. While individual and group treatment formats differ substantially, we propose that motivational techniques can be employed effectively in a group venue. This article will describe how the essence of a motivational approach, that is, consideration of ambivalence, lowering resistance, and fostering a readiness for change (Miller & Rollnick, 1991), can be created within a group setting. Particular attention will be given to the similarities and differences between individual motivational work and group motivational work.

The article will also discuss concepts used in the GMI approach that are informed by "self-determination theory" (Deci & Ryan, 1985). This work is concerned with the understanding of motivation as either internal/autonomous or external/controlled. Empirical evidence, which will be reviewed, indicates that people will judge as valuable and persist longer in behaviors that they perceive as internally driven. Additionally, autonomous/internal motivation can be fostered *or* undermined by interpersonal factors, including the nature of the therapeutic relationship. Those interpersonal factors found to be autonomy-supportive in other studies (Deci, Connell, &

Ryan, 1989) overlap substantially with GMI techniques and with the elements of FRAMES. Consequently, self-determination theory offers an important theoretical foundation for the clinical techniques used in motivational interventions. Self-determination theory also helps to highlight the GMI focus on the process of strengthening patients' internal/autonomous motivation for change, a critical issue in the *maintenance* of change.

We are completing a randomized clinical trial of GMI as an induction to standard outpatient treatment. The trial is testing specific motivational elements in two ways: (a) as the basis for a brief group treatment modality, in which, to our knowledge, no previous work has been done; and (b) as motivational preparation for further outpatient treatment, an area in which promising results have already been reported with individual MI (Bien et al., 1993; Brown & Miller, 1993). While full evaluation results will be presented separately, this article includes preliminary process data on changes in motivational variables for patients receiving GMI. Following Morgenstern's work (Morgenstern, Frey, McCrady, Labouvie, & Neighbors, 1996), attention to the processes of change is central to the study. The study hypothesizes that the motivational techniques used will affect specific internal processes, which will in turn lead to changes in such outcomes as retention in treatment. Specifically, differences between GMI-exposed and standard treatment patients in perceived "autonomy supportiveness" of the treatment setting, hypothesized as a distinctive consequence of GMI, will be reported.

FRAMES AND MOTIVATIONALLY BASED INTERVENTION RESEARCH

Drawing on evidence from the brief intervention literature (Bien et al., 1993), Miller and Sanchez (1994) proposed the acronym FRAMES, to describe the common motivational elements or therapeutic strategies found in successful brief interventions. These elements are: *F = Feedback*: Individualized feedback about the consequences of substance use is provided, based on the patient's report rather than generic educational feedback. Such feedback is important in creating a discrepancy between the patient's goals and their current reality. *R = Responsibility*: This element stresses the patient's freedom of choice and personal responsibility in deciding to make changes. Research indicates that when patients are in charge of these choices, there is reduction in resistance and increased likelihood of follow-through. *A = Advice*: Advice has been found to be most helpful when given clearly in a nondirective and noncoercive fashion. *M = Menu*: Patients are provided with a "menu" of options concerning change strategies, programs, and goals. Again, this has been found to be helpful in lowering resistance and promoting the development of intrinsic motivation. *E = Empathy*: This therapist style is marked by supportive, reflective listening and accurate understanding of the

patient's presentation. *S = Self-Efficacy*: This refers to the encouragement and development in patients of the belief that they can accomplish a specific goal, such as alcohol reduction or abstinence. This interactional element can also include therapist optimism that change is possible (Miller & Sanchez, 1994). Miller and Sanchez (1994) make the point that no single element among these six is either necessary or sufficient for a successful intervention based on interpersonal motivational strategies. Rather, these strategies have been found to increase rates of engagement in treatment and to reduce alcohol consumption (Miller et al., 1995).

Individual MI, developed over the last 15 years in alcoholism treatment, is the best known application of the motivational strategies outlined in FRAMES (Miller, 1983; Miller & Rollnick, 1991; Rollnick & Miller, 1995). MI generally consists of one or two sessions in which clients are interviewed concerning their use of alcohol and its consequences for them. This assessment can also include the collection of biological data (e.g., liver function). This information is then discussed with clients in a reflective feedback session, including use of norms for the data to help clients understand the relative severity of their drinking. The central organizing theme of a MI approach is to help clients in the identification and resolution of ambivalence, to prompt potential behavior change.

Miller, Sovereign, and Krege (1988) first tested the MI approach in the form of a 2-hour "Drinker's Check-up" (DCU) assessment and a follow-up feedback visit. Subjects were randomly assigned to one of three conditions: (a) recipients of the DCU and feedback, (b) recipients of DCU, feedback, and list of local treatment resources, and (c) waiting 6 weeks before receiving the DCU and feedback. The authors found no spontaneous behavior change in the 6-week delay group. At follow-up, approximately 6 weeks after all had participated in the DCU, the researchers found modest but significant decreases in alcohol consumption and peak blood alcohol concentrations for all groups.

A second study found that subjects receiving MI sessions reported significantly fewer drinking days after 6 weeks than subjects in a waiting list control group (Miller et al., 1993). This study also explored feedback style and found that one particular therapist behavior, "confronting," defined as challenging, disagreeing, expressing disbelief, emphasizing faults of the client or sarcasm, was significantly associated with a higher level of drinking after 12 months. The MI approach elicited significantly fewer negative, argumentative, and resistant behaviors from clients; these and similar client behaviors—arguing, interrupting, inattention, disagreeing with counselor—predicted alcohol consumption after 12 months.

An adaptation of MI, Motivational Enhancement Therapy (MET) was one of three interventions used in Project MATCH. MET was as effective as the other two treatments, cognitive-behavioral and 12-step facilitation,

with all treatments being associated with substantial and sustained reductions in drinking. Significantly, Project MATCH reported that outpatient clients initially low in motivation fared better in MET than in the alternative interventions (Project MATCH Research Group, 1997).

Several studies have indicated that motivational interventions can be useful with patients entering formal treatment settings. Bien et al. (1993) used MI with a sample of 16 randomly chosen outpatients at a VA alcoholism clinic, as an induction to weekly group therapy with a traditional 12-step philosophy. As compared with direct admissions to group therapy, experimental subjects showed significantly better outcomes at 3-month follow-up on a composite variable that included total standard drinks, peak blood alcohol concentration (BAC), and percent of days abstinent. However, this study did not examine the relationship of MI to treatment retention.

Brown and Miller (1993) also investigated MI as a preamble to inpatient rehabilitation treatment with a more severely alcohol-dependent population. The experimental subjects were rated by staff (blind to condition) as significantly more involved throughout their treatment and, at 3-month follow-up, had significantly lower alcohol consumption, than the "no preamble" controls. An analysis of covariance indicated that this difference in consumption was accounted for by differences in level of treatment involvement, that is, MI was found to affect treatment outcomes specifically by increasing treatment involvement.

While very little research has employed the MI approach for other than alcoholic populations, in principle the key motivational issues—ambivalence about and resistance to change—would be similar for other populations. Smith, Heckemeyer, Kratt, and Mason (1997) added three individual motivational sessions to a 16-session group behavioral weight-control program for obese older women. This random assignment study found that the motivationally enhanced subjects performed significantly better than the treatment as usual subjects in sessions attended, food diaries completed, frequency of blood glucose recorded, and glucose control at posttreatment.

Carey et al. (1997) combined the MI approach with a behavioral skills model in a four-session group intervention designed to enhance motivation to reduce the risk of HIV infection. The intervention specifically included therapists' use of empathy via nonjudgmental listening, client acceptance, and recognition that ambivalence about change is normal. Patients in the motivational condition had better outcomes than control patients, both immediately after the intervention and at 2- to 3-month follow-up, including increased HIV risk awareness, more intentions to practice safer behaviors, and decreased unsafe behaviors.

In addition to highlighting use of motivational principles in varied settings, the latter two studies are important in illustrating the successful use of a motivational approach in combination with more structured, goal-oriented

interventions. It seems that exploration of ambivalence and consideration of the issues involved in change can be helpful in such combination settings. The Carey et al. (1997) study also evidences the successful incorporation of these techniques in a group format.

SELF-DETERMINATION THEORY AND FRAMES

Deci (1972, 1975) and Deci and Ryan (1985, 1991) have extensively examined the implications of intrinsic and extrinsic motivation for determining behavior in a variety of life contexts. Termed *self-determination theory*, their work provides an avenue for understanding and measuring the *psychological processes* of motivational change. Self-determination theory conceptualizes motivation for action as arising from both internal (autonomous) and external (controlled) sources and predicts behavioral differences as a function of the source of motivation. Greater autonomous motivation has consistently predicted increased self-initiation and persistence of target behaviors across diverse study populations (Deci et al., 1989; Deci & Ryan, 1985, 1987, 1991; Ryan, Plant, & O'Malley, 1995; Ryan & Stiller, 1991). These findings are important in chemical dependency treatment, where issues of self-initiation and persistence in recovery behaviors, including treatment participation, are paramount.

Studies on self-determination have found that the individual's perception of the source of their motivation can be affected by the environment. That is, a greater sense of intrinsic or autonomous motivation for acting can be fostered by the person's environment, including a treatment setting (Deci, Neziek, & Scheinman, 1981; Deci et al., 1989; Koestner, Ryan, Bernieri, & Holt, 1984; Ryan, 1982; Ryan & Connell, 1989; Ryan & Grolnick, 1986; Ryan, Mims, & Koestner, 1983; Ryan & Stiller, 1991). Conversely, autonomous reasons for acting can be undermined by external contingencies and pressures or the perceptions thereof. As Ryan (1993) states: "One can be willful and free even under pressure to act in certain ways, provided one concurs with or accepts the mandates in a personal sense. Influences and inputs to my behavior must engender in me reasons for acting in concert with them, otherwise my behavior is not self-determined" (pp. 8–9). This has clear implications for the potential impact of the therapeutic environment on a person's motivation for change.

Empirical evidence suggests that there are several features critical to creating an "autonomy supportive" environment. These include: (a) providing information without pressure for a particular outcome, (b) positive feedback concerning competence, (c) absence of pressure to act in a certain way or achieve a particular outcome, (d) acknowledgment and acceptance of the other's perspective, (e) provision of choice, and (f) provision of a meaningful rationale (Koestner et al., 1984; Ryan, 1982; Williams,

Grow, Freedman, Ryan, & Deci, 1996). The presence of these features in the environment (provided by a teacher, therapist, manager, parent, etc.) encourages and supports the development and/or strengthening of autonomous, internalized motivation, empirically demonstrated in a variety of settings.

The therapeutic techniques described by the FRAMES model, which apparently developed independently of self-determination theory, in fact, contain the elements needed to create an autonomy-supportive environment. That is, the empirically derived FRAMES elements are similar or identical to those factors found to support and strengthen intrinsic/autonomous motivation. This includes all of the FRAMES elements. The parallels between the FRAMES elements and autonomy supportive factors are shown in Table 1.

Understanding the FRAMES elements specifically and motivational approaches in general as techniques to create an autonomy supportive environment is helpful in several respects. First, it shifts our motivational model away from a more descriptive "stages of change" analysis to a psychological framework centered around an autonomous/internalized and controlled/externalized conceptualization of motivation. This embeds the change model in a rich tradition of theoretical and empirical work on motivation that (as discussed) has yielded impressive findings concerning the role of motivation in self-initiation, behavioral persistence, and change. Second, it provides a cogent theoretical basis for understanding motivation as an interpersonally mediated process. This allows for the fruitful development of interventions across many treatment settings and with a variety of presenting problems. Third, following Morgenstern et al. (1996), it allows for analysis of the psychological process of motivation as a mediator of change. With self-determination as a theoretical backdrop to FRAMES/motivational techniques, we can focus on the interpersonal nature of motivation and study changes in such variables as patients' perception of the interpersonal environment and shifts in the autonomous nature of their motivation. Subsequent analysis of the effects of these motivational mediators on outcomes (e.g., retention, use) is then possible. Thus, adaptations of the FRAMES techniques and of self-determination theory have informed the development of our group motivational treatment model, described next.

GMI

GMI attempts to capture the spirit and apply the essential elements of an individually based motivational intervention within a group setting. GMI aims to (a) lower patients' resistance (i.e., to foster autonomy and avoid an externalized focus), (b) allow patients to arrive at their own decisions about the severity of their problems and possible need for change (i.e., to promote an internalized focus and sense of competence), and (c) consistently de-

TABLE 1
Parallel of FRAMES Elements to Autonomy Supportive Environmental Elements

FRAMES Elements	Autonomy Supportive Elements
Feedback: Nonjudgmental, objective feedback based on client report concerning substance use and its consequences for the individual	Provision of information without pressure toward a specific outcome
Responsibility: Focus on client freedom of choice to change and the personal responsibility implied by that freedom	Emphasis on freedom of choice. Absence of pressure to act in a certain way or achieve a certain outcome
Advice: Suggestions given directly in noncoercive and nondirective manner	Suggestions given in an objective and "informational" manner, rather than a "controlling" manner. Furnishing a meaningful rationale
Menu of options: Clear range of options laid out for client consideration. Lowers resistance to choice, increases intrinsic motivation	Provision of adequate information to support a competent choice. Support of individuals freedom to make that choice
Empathy: Supportive, reflective listening by therapist, and accurate understanding of client's presentation	Acknowledgement and acceptance of the other's perspective
Self-efficacy: Encouragement and fostering of client belief that they can accomplish a specific goal. Includes therapist optimism as a technique	Use of positive feedback in the service of increasing the individual's sense of competence, key in achieving autonomous motivation

FRAMES = feedback, responsibility, advice, menu of options, empathy, and self-efficacy.

liver the message that patients are free to decide about working toward change at this time. We suggest that this type of general motivational intervention works to create an "autonomy supportive" environment, thereby strengthening autonomous/intrinsic reasons for seeking and remaining in treatment. We hypothesize that this shift toward an autonomous orientation will result in longer-term maintenance of changes, as has been found in previous studies of autonomous and controlled motivation. This section will: (a) describe the format and content of our manualized GMI model, (b) describe the use of the FRAMES elements in the model, (c) discuss "translation" issues in moving from an individual to a group approach, and (d) discuss issues in using a manualized format for a motivational intervention.

Format and Content

GMI consists of four structured, manual-driven small group (six–eight members) sessions designed as a "loop tape," meaning that patients can enter at any point in the cycle and not have missed prerequisite earlier material. Materials developed are written treatment sessions, used as handouts and as a "jumping off" point for each session; a therapist's training manual describing the theoretical background for the approach; and a therapist's session guide to accompany each of the four sessions. The manual and guide provide detailed instructions for treatment delivery, including philosophy and style of treatment, and guidance in highlighting and implementing the FRAMES and self-determination elements. The therapist session guide gives a written explanation of the objectives and content of each session and how the motivational strategies apply to each paragraph of each session. Both documents are also useful for therapist supervision.

In training therapists, particular attention is paid to personalizing the session material for each patient and to involving each patient around his/her own specific concerns and reactions. The sessions are not didactic or psychoeducational (except insofar as the therapist provides information *requested* by the patients), as this would be antithetical to the concepts of motivational engagement.

The four sessions of GMI are:

- *Understanding and Acceptance: Looking at Consequences:* The entire session is framed as the question: "Do you have a problem that you want help with?" One of the central tenets of a motivational approach is employed here, the idea that the patients must evaluate and decide for themselves whether their substance use is a problem that they desire to change. After stating this explicitly, the session leads patients through a concrete series of questions concerning areas of potential consequences in their lives, asking whether substance use makes no difference to, helps, or hurts their functioning in that area. This focus on both the "pros" and "cons" of substance use is important in normalizing and conveying an acceptance of ambivalence about change. The patient's frame of reference is the starting point, which is also important in building a sense of competence and autonomy.
- *A Hard Choice:* This session describes the early period when a person is deciding whether or not to stop using substances. This period is seen as full of many emotions, some of which can intensify when a person decides to make a change. The session emphasizes that this turbulence can result in a decision to leave treatment, that this decision is the patient's alone to make, that there are many factors pushing against making a change, but that we encourage them to believe in

themselves and their power to make a change for the better.

- *Roadblocks to Getting Help: Isolation and Honesty:* This session works with the issue of substance dependence as a lonely and very difficult struggle. In particular, there is discussion about how hard it is to ask for help for a variety of reasons, including shame, self-disgust, fear, and hopelessness, but that this is normal. This is tied in with the difficulty in being truthful that many people experience and the subsequent loneliness created. In addition, there is discussion of the common impulse to isolate oneself, and how this can lead to relapse. Last, an attempt is made to normalize patients' sometimes disorienting early recovery experiences.
- *Deciding to Stop and Stay Stopped:* This session starts by reiterating that lasting change will occur only if the decision to change has been endorsed by the patient. It is stated that willpower alone will not be enough to effect such change over the long term, and that "tools of recovery" must be utilized. These include being "selfish" at this stage, understanding that emotions may be labile, that ambivalence about change will come and go, and that this is to be expected. There is discussion of the idea of "triggers," the importance of recognizing them, and options for structuring them out of one's life, standard concepts from a relapse prevention approach. Autonomy is promoted through focusing on the importance of one's own decisions and by working on concrete strategies for change. The latter works to develop a sense of competence, considered central in the development of autonomy.

Use of the FRAMES Strategies in GMI

This semistructured group model utilizes elements of all six FRAMES strategies:

1. *Responsibility for change:* GMI includes two concepts pertinent to this; the clients' freedom of decision about whether change is necessary *and* whether they want to commit to change. In both, personal responsibility for deciding is stressed. The strategy is consonant with data showing increased follow-through when people feel they have chosen their recovery plan and with reduction in resistance when given freedom of choice. Group sessions include such statements as: "We have discussed the issue of whose decision it is to stop using alcohol and/or other drugs. It's yours! If you have decided to stop. . . ."; "In a way, the choice to get high makes sense. None of us likes to feel afraid and uncertain, and facing painful feelings and situations is a real challenge. The decision at this moment is of course yours and yours alone. . . ."; "Treatment and recovery are for you . . . let yourself have them."

Framing the issue of change in this manner is helpful in achieving the motivational goals of (a) lowering resis-

tance (i.e., by not forcing the client's hand and identifying the issue as an internal one, thus avoiding an interpersonal struggle), and (b) promoting consideration of ambivalence (i.e., by making it clear that the therapist will not decide for the client whether or not they should change).

2. *Empathic therapist approach/style:* As identified in the therapeutic alliance literature (Chafetz et al., 1962; Horvath & Greenberg, 1989; Mohl, Martinez, Ticknor, Huang, & Cordell, 1991; Najavits & Strupp, 1994; Najavits & Weiss, 1994), it is critical that the group leader convey a sense of respect for and acceptance of clients (nonspecific factors in therapeutic alliance), and be able to accurately understand and reflect back the clients experience, including states of ambivalence, discomfort, and self-doubt. This counseling style is also marked by a warm, supportive, attentive, and positive demeanor. In addition to counselor training in this empathic style, the written sessions themselves are framed in a manner that attempts to convey respect and acceptance of "where the client is at," as well as raising issues that can be painful and acknowledging the legitimacy of such pain. The written material includes such statements as: "For many people, dealing with their addiction becomes an isolated and lonely struggle . . . this is discouraging and demoralizing and can lead to a sense of failure, shame and self-loathing." "If you've decided you would like our help, we are happy to have you and to help you begin to lay out the path of your recovery." "For most people, entering treatment for an alcohol and/or drug problem can be scary and confusing."

The use of empathy in both the therapist's style and the written material is helpful in achieving the motivational goals of (a) lowering resistance (i.e., through an inviting and accepting style), (b) promoting consideration of ambivalence (by showing understanding and giving acceptance, thereby decreasing the threat of being criticized/rejected for ambivalence), and (c) allowing for the development of discrepancy by discussing the client's sense of shame due to failure to live up to his/her idealized self-image.

3. *Self-efficacy:* This element is aimed at fostering the client's sense that they can accomplish a specific goal, such as abstinence or reduction of substance use. Included in this strategy are explicit therapist statements of optimism about the client's ability to change. In the group setting, therapists are trained to work with the patient's growing sense that they can in fact take effective steps to change. An important review that occurs is an examination of past successful attempts to achieve abstinence. This review in the presence of the other group members is an additional powerful catalyst in increasing self-efficacy. Miller and Sanchez (1994) also point out that self-efficacy can be enhanced through stressing personal responsibility. This is part of the written material in GMI, including such state-

ments as: “No one knows you better than yourself. Whether a counselor, spouse, EAP, parent, parole officer or friend thinks you ‘have a problem with substances,’ the only person whose opinion really matters is you.” “Experience shows that every person has their own pace for deciding to stop using or to get help . . . we encourage you to believe yourself for a change.”

4. *Menu of options*: The main issue here is making it clear to patients that they have choices and that they are competent to make them. This is probably more important than the actual options explored. In GMI, change strategies and options (a “menu”) are discussed in every group session, including such options as involvement of family, self-help, and psychotherapy, as well as possible medications, such as disulfiram (Antabuse), naltrexone, etc. Such options are not explicitly listed in the sessions, as there are too many individual possibilities to cover, but patients are encouraged to develop a plan that promises to work for them. In our current study, GMI is being used as an induction to a specific follow-up treatment; the “menu,” therefore, includes continuation of formal treatment at the program.
5. *Advice*: This is understood as the therapist’s transmittal of information that may be helpful in clarifying constructive choices. The *style* of conveying this information is crucial to self-determination concerns. Suggestions or advice given in a controlling manner produce an externalized locus, whereas suggestions given in an “informational” manner, in response to the client’s expressed needs, fosters an internal locus, or the ability to co-opt these suggestions as one’s own. Although the standardization of approach is important in GMI, advice is obviously idiosyncratic to a specific patient and time. However, therapists are trained to understand the distinction between directive, controlling versus responsive, informational advice. Of course, even trained staff may revert inadvertently to what we regard as overly aggressive or directive dictates; thus ongoing supervision is important.
6. *Feedback about each individual’s risk*: Perhaps the most difficult FRAMES element to translate from an individual to a group format is the use of personalized feedback about the patient’s current behavior and risk. In previous FRAMES-based interventions, what is typically meant by “personalized” is both a one-to-one interchange and giving feedback based on the personal information the patient has supplied. This information is reviewed in an objective, nonjudgmental and empathic manner. It is quite clear from the literature that therapeutic effectiveness requires feedback about that individual. Not effective are educational approaches aimed at outlining the generic consequences of substance use.

The *style* of this feedback is designed to free patients from the need to defend themselves from self-imposed or therapist-imposed judgments, and thus to more openly examine their situation and the possible need for change. The *content* of this feedback is intended to help patients

develop a discrepancy between their behavior and their desired self or life goals. The objectives of feedback, that is, lowering resistance and developing internal discrepancy, can be achieved in GMI, with suitable modifications for group delivery. Through the use of session materials written in a personal and empathic style, patients review descriptions of common substance-related issues and consequences. Patients are encouraged to identify with problematic behaviors/consequences they have personally experienced. The written sessions emphasize that everyone is different, that critiquing others extensively has little value, and that each patient must define the nature/extent of any problem for her/himself. In this way, the group explores the consequences of members’ substance use in an open and accepting manner, and allows for a consideration of the discrepancies between personal goals and behaviors. The group context also affords members the opportunity to learn about others’ substance use consequences with which they may identify. This group process normalizes and detoxifies shameful and humiliating practices and self-views.

This strategy is specifically not a didactic one in nature, or an enumeration of substance-related consequences at large, but in our experience a very involving, thought-provoking, and reflective personal examination for the group members. We believe the critical factor in this group version of providing feedback is the style in which it is done: empathic, nonlabeling, and eliciting of personal identification, not demanding of it. This last point is exemplified by statements such as: “If you do not identify with any of these statements as problems for you, then there’s probably no reason for treatment.” Illustrative session material includes the following: “*Question*—does my use of substances make no difference to, help, or hurt my relationships, my job, my health, how I feel each day?” “If I answered ‘hurt’ to any of the above, does it matter enough to me to want to change at this time?”

In the development of this group approach, we considered another alternative for providing personalized feedback, that is, to bring back to the group material that was initially obtained during each individual’s intake assessment. In addition to group constraints, we concluded that the more salient aspect of personal feedback was the *interpersonal process* of self-disclosure and nonjudgmental feedback, as opposed to the personalized content. While we strive to develop a personalized “picture,” the interpersonal process of disclosure and feedback in this treatment takes place in the group, between each individual and the rest of the group (i.e., leader and members).

“Translation” Issues from Individual to Group Format

In a recent study, Covi, Ruckel, Hess, and Arroa (1995) adapted a standardized individual treatment (a manually

guided cognitive-behavioral intervention for cocaine users) for use in a group format. They reported that treatment protocols were more closely adhered to in group than in individual sessions. They also found that certain key therapeutic techniques used in the individual therapy could be transferred without modification to the group modality, and that it was feasible to modify other individual techniques to make them effective in a group setting. While our experience also has been that this translation is achievable, several issues were important to resolve in the transition from an individual to a group modality:

1. *Explicit identification of ambivalence and its sources.*

Rollnick and Miller (1995) state that, most fundamentally, motivational approaches are a “style for eliciting behavior change by helping clients to explore and resolve ambivalence.” We attempt to create this “style” in the group setting. Because a group does not offer as much opportunity for individual unfolding and exploration of ambivalence, it is critical to overtly identify this issue and its manifestations. GMI’s written sessions explicitly deal with ambivalence about deciding to stop using substances and remaining in treatment. Discussion is prompted with statements in the material, such as: “This is a time (early treatment) when you are least likely to return to treatment, despite your best intentions,” and “Does the work and pain of making a change outweigh the negative consequences of getting clean that I [the patient] just listed?”

While this more explicit identification process does not parallel the individual MI “eliciting” style initially, its effect in the group is substantively the same. That is, by identifying the issue of ambivalence for the group, clients in fact actively relate the issue to themselves in a personal and compelling way. To facilitate this, instructions are provided to therapists explaining the concept and role of ambivalence, some typical patient expressions of ambivalence, principles of dealing with ambivalence, not as “denial” or “resistance to treatment,” but as part of a movement toward change, and specific examples of how ambivalence is related to the handout topic of the day. The following messages are delivered in the context of the group by the therapist:

- a. You (the client) have a judgment/choice to make concerning your present situation, and it is yours and yours alone to make.
- b. You have a variety of compelling reasons *not* to examine your present state and your options, including:
 - Painful emotions (shame, guilt, anger, fear etc.)
 - Potential external consequences
 - Part of you wants to keep using substances (this is normal and OK)
 - Treatment can be uncomfortable and difficult

- c. Everyone struggles with these reasons (ambivalence)
- d. You may conclude after examination that change is not necessary or not worth it.

2. *Dealing with client participation that is “nonmotivational” in nature.*

In motivational interventions, it is hypothesized that the therapist’s nonjudgmental and empathic approach will allow the client to be less defensive and help lower their resistance to the change process. With less individual therapist attention in a group, the influence of group members on the nature of the treatment experience is quite powerful. Confrontation, advice-giving, and labeling of behavior (not congruent with the interpersonal motivational strategies) may well be introduced by group members. In the event of patient participation that is confrontational, demeaning of others or self-demeaning, the therapist is guided through such interactions (in the therapist’s manual) with explicit instructions on pointing out the nonaccepting and judgmental aspects of these interactions. For example, after such an interaction, the therapist might point out that advice from other clients is welcome and appreciated, but that ultimately each person must consider what is helpful for themselves, which may differ from others. This gives support for autonomy, and undercuts the sense of being controlled by other’s feedback. Additionally, the therapist models both an empathic approach to others and is actively intervening against the idea of confrontational, humiliating interpersonal behaviors. Such moments are considered powerful opportunities to work with these often internalized and unspoken judgments and self-criticisms. In addition, we explicitly and assertively work with the issue of stigmatization and its concomitant shame, humiliation, and defensiveness by describing these very common reactions throughout the written sessions. This is particularly critical in a short-term treatment and in a group treatment, where resistance to acknowledging such feelings can neutralize the effectiveness of the group. This manualized GMI treatment makes these reactions and postures explicit, comprehensible, and acceptable/normal. The effect is to immediately heighten the level of honesty in the group, and increase the sense of acceptance and safety, critical factors in retaining patients and affecting them in a brief period.

3. *Use of positive interpersonal reinforcement.* Motivational interventions assume that ambivalence about change and subsequent resistance and defensiveness are the primary hurdles to help patients get over initially. Consequently, we have incorporated into the GMI approach the use of positive interpersonal reinforcement. Based on previous work (Foote, Seligman, Handelsman, Magura, & Rosenblum, 1994; Seligman et al., 1996), the use of such techniques as “engagement facilitators” seems critical, especially in the context of preparation for further treatment. In particular, the group setting can heighten the impact of one specific factor in

patient resistance/defensiveness, which is the need to defend against real or imagined social condemnation. While individual motivational approaches work to defuse patient defensiveness and resistance by providing a nonjudging interpersonal experience, this is much more difficult to facilitate for each individual in a group setting. This is in part because of less individual attention, and in part because the fear of social stigmatization is heightened in a group. In response to this, we incorporate the explicit use of positive feedback, both in the written material (e.g. "by being here . . . you are laying the foundation for the drug-free lifestyle you deserve," etc.) and in the therapist's style of interaction (outlined in the therapist's manual), which is encouraging and acknowledges each individual's progress, at whatever level achieved.

GMI as a Manualized Treatment

Many clinicians have traditionally balked at the notion of structuring treatment through the use of manuals and handouts. However, there is evidence that standardizing treatment in this way actually improves outcome (Luborsky, McLellan, Woody, O'Brien, & Auerbach, 1985) and reduces variability among therapists for the better (Crits-Christoph et al., 1991). From a research perspective, treatment manuals and other standardization procedures are important in helping specify the essential components of the particular therapeutic approach (Carroll, 1997; Kazdin, 1995). This in turn allows for standardized measurement of these components through the application of an objective rating system.

As described above, the GMI sessions are written, with copies distributed for group members to read aloud during the session. We have found through experience that group sessions that are focused on a written topic in this manner are effective in group engagement (Foote et al., 1994). There appear to be several reasons for this:

1. *Anxiety reduction.* In a setting that is the initial point of treatment contact, client anxiety about the group, entering treatment, and being "public" about their recovery struggle, is often quite high. The use of written handouts acts to focus the group on an activity, which in turn has the effect of facilitating anxiety reduction and increasing openness in the group.
2. *Coverage of relevant material.* Having a written session ensures that the material deemed critical for all to hear will in fact be heard.
3. *Standardization of treatment delivery.* Written materials accompanied by a written therapist guidance manual help assure that both the content and spirit of the treatment approach will be followed. This is critical in light of evidence that counselor style is an important variable in outcome (Bien et al., 1993; McLellan et al., 1988; Najavits & Weiss, 1994).
4. *Inclusion of all patients.* Written questions are included in each session. Again, this helps concretize the issues

and decreases the likelihood of avoidant behavior, so that all patients are included in the process.

5. *Take-home materials.* Written materials allow patients to review concepts, such as taking a nonjudgmental self-view and being the decision-maker in their recovery process, as well as review concrete goals and behaviors outside of the therapy situation. This facilitates continuing consideration of these difficult-to-internalize concepts.

Preliminary Process Evaluation Results

A random assignment clinical trial of GMI is underway at the Smithers Treatment Center in New York City. This trial is comparing the effects of the GMI preamble to outpatient treatment versus entry to outpatient treatment "as usual." Central to the study is measuring the process variables thought to be the chief components of change in motivational therapy. We are particularly concerned with the effects of GMI on patient experiences of autonomous reasons for remaining in treatment and concomitant effects on retention. Several pertinent process findings are emerging. First, compared to control group, patients receiving GMI perceive significantly greater autonomy-supportiveness in their group, as measured after four sessions by the Health Care Climate Questionnaire (HCCQ; Williams et al., 1996). Second, these HCCQ scores are related to frequency of attendance in the first four sessions of treatment. (It will be necessary to examine whether this translates into differences in level of autonomous vs. controlled motivation.) Third, GMI appears to be differentially affecting patients' valuation of the costs and benefits of abstinence, a behavioral indication of ambivalence, as measured by the Alcohol and Drug Consequences Questionnaire (ADCQ; Cunningham, Sobell, Gavin, Sobell, & Breslin, 1997). Specifically, GMI participants appear to be more realistically assessing and acknowledging the costs of stopping use, which can be interpreted as greater ability to acknowledge ambivalence, a critical part of the change process in a motivational model. Complete analysis of the completed trial will shed further light on these preliminary findings.

CONCLUSION

This article has described a group approach for working with chemically dependent clients in a motivationally enhancing manner. While the individual MI approach has shown great promise over the last 15 years, a translation of the key elements of this approach to a group setting has not been reported to date. In the development of this group model, we have utilized a theoretical basis for understanding the effectiveness of motivational techniques, specifically the self-determination model of motivation proposed by Deci and Ryan (1985). This theory of motivation offers an empirical foundation that is compelling and clinically appealing, insofar as it helps address the

questions of why people are seeking change and how motivation for change can be fostered. Developing a clinical model with a strong theoretical basis also affords the opportunity to study the mediating change processes involved in the treatment. This is important in understanding how a treatment is effective and in what ways it can be improved.

There are several compelling reasons for developing a group motivational approach. From a practical standpoint, group therapy is the most widely used format in addiction treatment, resulting from a combination of philosophical beliefs about "what works" and the realities of providing cost-effective treatment. GMI is an attempt to develop a "modularized" group treatment that can be implemented within the existing framework of many treatment centers. GMI is proposed as potentially more cost-effective than individual motivational interventions, that is, more patients can be served in groups than individually at the same staffing level. (This presumes comparable effects on patient motivation and subsequent retention.) In this era of managed care, treatment programs need to be sensitive to cost considerations. Economic reality increasingly dictates the total number of treatment sessions allowed, the amount of reimbursement provided, and the type of service that will be reimbursed. The consequence is that treatment centers need to provide, when possible, brief focused group interventions, these being more staff-efficient and likely to be reimbursed. Finally, there is some evidence concerning the salutary effects of group dynamics on treatment effectiveness. Specifically in addiction treatment, the "power of the group" is considered to derive from such factors as peer support, group self-revelation, and reduction of shame and isolation through group identification. These are all consonant with a motivational approach and can yield additional therapeutic impact.

Preliminary data from a GMI pilot study currently being conducted are consistent with certain hypotheses about the process of GMI treatment. In particular, the prediction that patients in the GMI condition would perceive the treatment environment and group leader as "autonomy supportive" was supported. That is, creating an autonomy supportive environment is key to fostering patients' sense of autonomy in choosing to make significant change, whether that be in the form of sustaining their treatment involvement, moving toward reduction of their substance use or its attendant harms, or considering the difficult issues involved in recovery.

We consider this group treatment a beginning. In our clinical experience, these groups have been interesting and stimulating to conduct, involving of patients, and relatively simple to include as an addition to ongoing treatment. We suggest that the group format could be employed in other ways, including as a stand alone treatment akin to "traditional" motivational interviewing. We further suggest that the specific content of the four written sessions is less important than the effective translation of

the FRAMES techniques, and an understanding of the process of fostering autonomous motivation for action. Understanding motivation as an interpersonal process is central to creating an autonomy supportive treatment environment, whether in a group or individual treatment setting. The flexible use of these techniques and principles, incorporated into a semistructured, manual-guided format, appears to allow for an effective and compelling group motivational treatment.

REFERENCES

- Baekeland, F., & Lundwall, L. (1975). Dropping out of treatment: A critical review. *Psychological Bulletin*, *82*, 738–783.
- Ball, J., & Ross, A. (1991). *The effectiveness of methadone maintenance treatment*. New York: Springer-Verlag.
- Bien, T.H., Miller, W.R., & Tonigan, S. (1993). Brief interventions for alcohol problems: A review. *Addiction*, *88*, 315–336.
- Brown, J.M., & Miller, W.R. (1993). Impact of motivational interviewing on participation and outcome in residential alcoholism treatment. *Psychology of Addictive Behaviors*, *7*, 211–218.
- Carey, M.P., Maisto, S.A., Klachman, S.C., Forsyth, A.D., Wright, E.M., & Johnson, B.T. (1997). Enhancing motivation to reduce the risk of HIV infection for economically disadvantaged urban women. *Journal of Consulting and Clinical Psychology*, *65*, 531–541.
- Carroll, K.M. (1997). Manual-guided psychosocial treatment: A new virtual requirement for pharmacotherapy trials? *Archives of General Psychiatry*, *54*, 923–928.
- Chafetz, M.E., Blane, H.T., Abram, H. S., Clark, E., Golner, J.H., Hastie, E.L., & McCourt, W.F. (1962). Establishing treatment relations with alcoholics. *Journal of Nervous and Mental Disease*, *134*, 395–409.
- Covi, L., Ruckel, S., Hess, J., & Arroa, R. (1995). Manual guided individual and group cognitive behavior therapies: Similarities and differences (Abstract). *College on Problems of Drug Dependence*, Scottsdale, Arizona, June 10–15.
- Crits-Christoph, P., Barnacke, K., Kurcias, J.S., Beck, A.T., Carroll, K., Perry, K., Luborsky, L., McLellan, T., Woody, G.E., Thompson, L., Gallagher, D., & Zitrin, C. (1991). Meta-analysis of therapist effects in psychotherapy outcome studies. *Psychotherapy Research*, *1*, 81–91.
- Cross, G.M., Morgan, C.W., Mooney, A.J., Martin, C.A., & Rafter, J.A. (1990). Alcoholism treatment: A ten-year follow-up study. *Alcoholism: Clinical and Experimental Research*, *14*, 169–173.
- Cunningham, J.A., Sobell, L.C., Gavin, D.R., Sobell, M.B., & Breslin, F.C. (1997). Assessing motivation for change: Preliminary development and evaluation of a scale measuring the costs and benefits of changing alcohol and drug use. *Psychology of Addictive Behaviors*, *11*, 107–114.
- Deci, E.L. (1972). Intrinsic motivation, extrinsic reinforcement, and inequity. *Journal of Personality and Social Psychology*, *22*, 113–120.
- Deci, E.L. (1975). *Intrinsic motivation*. New York: Plenum Press.
- Deci, E.L., Connell, J.P., & Ryan, R.M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, *74*, 580–590.
- Deci, E.L., Neziek, J., & Scheinman, L. (1981). Characteristics of the rewarder and intrinsic motivation of the rewardee. *Journal of Personality and Social Psychology*, *40*, 1–10.
- Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Deci, E.L., & Ryan, R.M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, *53*, 1024–1037.
- Deci, E.L., & Ryan, R.M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska Symposium*

- sum on motivation: Vol. 38, Perspectives on motivation* (pp. 237–288). Lincoln, NE: University of Nebraska Press.
- DeLeon, G., & Jainchill, N. (1986). Circumstances, motivation, readiness and suitability (CMRS) as correlates of treatment tenure. *Journal of Psychoactive Drugs*, *8*(3), 203–208.
- Emrick, D.C. (1975). A review of psychologically oriented treatment of alcoholism: II. The relative effectiveness of different treatment approaches and the relative effectiveness of treatment versus no treatment. *Journal of Studies on Alcohol*, *36*, 88–108.
- Foote, J., Seligman, M., Handelsman, L., Magura, S., & Rosenblum, A. (1994). An enhanced positive reinforcement approach for the severely impaired cocaine abuser. *Journal of Substance Abuse Treatment*, *11*(6), 525–539.
- Helzer, J.E., Robins, L.N., Taylor, J.R., Carey, K., Miller, R.H., Combs-Orme, T., & Farmer, A. (1985). The extent of long-term moderate drinking among alcoholics discharged from medical and psychiatric treatment facilities. *New England Journal of Medicine*, *312*, 1678–1682.
- Hoffman, N., & Harrison, P. (1986). *CATOR 1986 report: Findings two years after treatment*. St. Paul, MN: CATOR.
- Horvath, A.O., & Greenberg, L.S. (1989). Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology*, *36*, 223–233.
- Institute of Medicine. (1990). *Broadening the base of treatment for alcohol problems*. Washington, DC: National Academy Press.
- Kazdin, A.E. (1995). Methods of psychotherapy research. In B. Bongar & L.E. Beutler (Eds.), *Comprehensive textbook of psychotherapy: Theory and practice* (pp. 405–433). New York: Oxford University Press.
- Koestner, R., Ryan, R.M., Bernieri F., & Holt, K. (1984). Setting limits in children's behavior: The differential effects of controlling versus informational styles on intrinsic motivation and creativity. *Journal of Personality*, *52*, 233–248.
- Luborsky, L., McLellan, A.T., Woody, G.E., O'Brien, C.P., & Auerbach, A. (1985). Therapists' success and its determinants. *Archives of General Psychiatry*, *44*, 602–611.
- Mammo, A., & Weinbaum, D.F. (1993). Some factors that influence dropping out from outpatient alcoholism treatment facilities. *Journal of Studies on Alcohol*, *54*, 92–101.
- McKay, J.R., Murphy, R., & Longabaugh, R. (1991). The effectiveness of alcoholism treatment: Evidence from outcome studies. In S.T. Mirin, J. Gossett, & M.C. Grob (Eds.), *Psychiatric treatment: Advances in outcome research* (pp. 143–158). Washington, DC: American Psychiatric Press, Inc.
- McLellan, A.T., Luborsky, L., Woody, G.E., & O'Brien, C.P. (1982). Is treatment for substance abuse effective? *Journal of the American Medical Association*, *247*, 1423–1427.
- McLellan, A.T., Woody, G.E., Luborsky, L., & Groehl, L. (1988). Is the counselor an "active ingredient" in substance abuse rehabilitation? An examination of treatment success among four counselors. *Journal of Nervous and Mental Disorder*, *176*, 423–430.
- Miller, W.R. (1983). Motivational interviewing with problem drinkers. *Behavioural Psychotherapy*, *11*, 147–172.
- Miller, W.R. (1985). Motivation for treatment: A review with special emphasis on alcoholism. *Psychological Bulletin*, *98*, 84–107.
- Miller, W. R., Benefield, R.G., & Tonigan, J.S. (1993). Enhancing motivation for change in problem drinkers: A controlled comparison of two therapist styles. *Journal of Consulting and Clinical Psychology*, *61*, 455–466.
- Miller, W.R., & Brown, S.A. (1997). Why psychologists should treat alcohol and drug problems. *American Psychologist*, *52*, 1269–1279.
- Miller, W.R., Brown, J.M., Simpson, T.L., Handmaker, N.S., Bien, T.H., Luckie, L.F., Montgomery, H.A., Hester, R.K., & Tonigan, J.S. (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. (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. (1991). *Motivational interviewing: Preparing people to change addictive behavior*. New York: Guilford Press.
- Miller, W.R., & Sanchez, V.C. (1994). Motivating young adults for treatment and lifestyle change. In G. Howard (Ed.), *Issues in alcohol use and misuse by young adults* (pp. 55–82). Notre Dame, IN: University of Notre Dame Press.
- Miller, W.R., Sovereign, R.G., & Kregge, B. (1988). Motivational interviewing with problem drinkers: II. The Drinker's check-up as a preventive intervention. *Behavioural Psychotherapy*, *16*, 251–268.
- Mohl, P.C., Martinez, D., Ticknor, C., Huang, M., & Cordell, L. (1991). Early dropouts from psychotherapy. *Journal of Nervous and Mental Disease*, *179*, 478–488.
- Moos, R.H., Finney, J.W., & Cronkite, R.C. (1990). *Alcoholism treatment: Context, process, and outcome*. New York: Oxford University Press.
- Morgenstern, J., Frey, R., McCrady, B., Labouvie, E., & Neighbors, C.J. (1996). Examining mediators of change in traditional chemical dependency treatment. *Journal of Studies on Alcohol*, *57*, 53–64.
- Najavits, L.M., & Strupp, H.H. (1994). Differences in the effectiveness of psychodynamic therapists: a process-outcome study. *Psychotherapy*, *31*(1), 114–123.
- Najavits, L.M., & Weiss, R.D. (1994). Variations in therapist effectiveness in the treatment of patients with substance abuse disorders: An empirical review. *Addiction*, *89*, 679–688.
- Pekarik, G., & Zimmer, L. (1992). Relation of client variables to continuance in five types of alcohol treatment settings. *Addictive Behaviors*, *17*, 105–115.
- Prochaska, J.O., DiClemente, C.C., & Norcross, J.C. (1992). In search of how people change. *American Psychologist*, *47*, 1102–1114.
- Project MATCH Research Group. (1997). Matching alcoholism treatments to client heterogeneity: Project MATCH posttreatment drinking outcomes. *Journal of Studies on Alcohol*, *58*, 7–29.
- Rohan, W.P. (1970). A follow-up study of hospitalized drinkers. *Disease of the Nervous System*, *31*, 259–265.
- Rollnick, S., & Miller, W.R. (1995). What is motivational interviewing? *Behavioral and Cognitive Psychotherapy*, *23*, 325–334.
- Ryan, R.M. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. *Journal of Personality and Social Psychology*, *43*, 450–461.
- Ryan, R.M. (1993). Agency and organization: Intrinsic motivation, autonomy and the self in psychological development. In J. Jacobs (Ed.), *Nebraska Symposium on Motivation* (Vol. 40, pp. 1–56). Lincoln, NE: University of Nebraska Press.
- Ryan, R.M., & Connell, J.P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, *57*, 749–761.
- Ryan, R.M., & Grolnick, W.S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perceptions. *Journal of Personality and Social Psychology*, *50*, 550–558.
- Ryan, R.M., Mims, V., & Koestner, R. (1983). Relation of reward contingency and interpersonal context to intrinsic motivation: A review and test using cognitive evaluation theory. *Journal of Personality and Social Psychology*, *45*, 736–750.
- Ryan, R.M., Plant, R.W., & O'Malley, S. (1995). Initial motivations for alcohol treatment: Relations with patient characteristics, treatment involvement, and dropout. *Addictive Behaviors*, *20*, 279–297.
- Ryan, R.M., & Stiller, J. (1991). The social contexts of internalization: Parent and teacher influences on autonomy, motivation and learning. In P.R. Pintrich & M.L. Maehr (Eds.), *Advances in motivation and achievement: Vol. 7. Goals and self-regulatory processes* (pp. 115–149). Greenwich, CT: JAI Press.
- Seligman, M., Foote, J., Magura, S., Handelsman, L., Rosenblum, A., Lovejoy, M., & Stimmel, B. (1996). Video techniques with chemically-dependent patients. *The International Journal of the Addictions*, *31*, 965–1000.

- Simpson, D.D., & Joe, G.W. (1993). Motivation as a predictor of early dropout from drug abuse treatment. *Psychotherapy*, **30**, 357–368.
- Smith, D.E., Heckemeyer, C.M., Kratt, P.P., & Mason, D.A. (1997). Motivational interviewing to improve adherence to a behavioral weight-control program for older obese women with NIDDM. A pilot study. *Diabetes Care*, **20**, 52–54.
- Vaillant, G.M. (1983). *The natural history of alcoholism: Causes, patterns, and paths to recovery*. Cambridge, MA: Harvard University Press.
- Wickizer, T., Maynard, C., Atherly, A., Frederick, M., Koepsell, T., Krupski, A., & Stark, K. (1994). Completion rates of client discharged from drug and alcohol treatment programs in Washington State. *American Journal of Public Health*, **84**, 215–221.
- Williams, G.C., Grow, V.M., Freedman, Z.R., Ryan, R.M., & Deci, E.L. (1996). Motivational predictors of weight-loss maintenance. *Journal of Personality and Social Psychology*, **70**, 115–126.