

Relapse prevention: From radical idea to common practice

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The term “relapse prevention” drew great criticism and was not generally accepted when it was initially introduced in the early 1980s. The idea of talking with clients about the possibility of relapse was an incredibly radical idea until the pioneering work on relapse prevention by Alan Marlatt and his colleagues challenged the prevailing disease conceptualization of addictions and provided a revolutionary perspective that focused on understanding the factors contributing to and maintaining addiction. Today, relapse prevention is both a manualized treatment and a general treatment strategy that has been implemented in addiction treatment centers around the world. The theory and practice of relapse prevention has emerged as one of the most prominent and pervasive approaches in the treatment of addictive behaviors and stands as one of Alan Marlatt’s most notable and longest-lasting contributions to the field. This article provides a review of the development, adaptation, and dissemination of relapse prevention over the past 30 years and also provides some ideas for the future of relapse prevention in research and treatment.

Keywords: Relapse, relapse prevention, substance use disorders, behavior change

INTRODUCTION

Relapse Prevention (RP) is a self-management program designed to enhance the maintenance stage of the habit-change process. The goal of RP is to teach individuals who are trying to change their behavior how to anticipate and cope with the problem of relapse. In a very general sense,

relapse refers to a breakdown or setback in a person’s attempt to change or modify any target behavior. Based on the principles of social-learning theory, RP is a self-control program that combines behavioral skill training, cognitive interventions, and lifestyle change procedures (Marlatt, 1985).

THREE LEGS OF THE STOOL: EARLY DEVELOPMENT OF RELAPSE PREVENTION THEORY AND THERAPY

Alcoholism and drug dependence have a long history of being described as chronic disorders characterized by individuals’ loss of control over their alcohol or drug use, high rates of relapse, and resultant poor treatment outcomes (White, Boyle, & Loveland, 2002). Many treatment professionals, as well as alcohol- and drug-dependent individuals, viewed relapse as inevitable, resulting in a sense of pessimism about the “treatability” and long-term prognosis of addictive behaviors. The pioneering work of Alan Marlatt and his colleagues, initiated in the early 1970s, challenged the then prevailing disease conceptualization of addictions, provided a vastly different perspective, shifted the paradigm in our understanding of factors contributing to and maintaining substance abuse, and presented a more hopeful possibility that loss of control and relapse need not be inevitable. Through a series of early experimental analog studies, clinical observations, and intervention trials both the theory and practice of relapse prevention (RP) have emerged as one of the most prominent and pervasive approaches in the treatment of addictive behaviors and stands as one of Alan’s most notable and longest-lasting contributions to the field.

LEG 1. CHALLENGING THE LOSS OF CONTROL TENET OF THE DISEASE MODEL: RELAPSE IS NOT INEVITABLE

One of the first areas challenged by Alan was the notion of loss of control as a key component of alcohol dependence and that this phenomenon was attributable to the pharmacological effects of alcohol on the altered physiological state of the alcoholic. The prevailing belief at the time was that an alcoholic, if given alcohol even in relatively small amounts, would lose control over drinking and be unable to stop. The slogan "First drink, then drunk" was a mantra among many alcoholics and treatment providers (Sobell, Sobell, & Christelman, 1972). However, a few small scale studies had begun to question this tenet of the disease model of alcoholism. Preliminary results suggested that loss of control might not occur, but rather may be a "myth"; further, it was suggested that psychological, environmental, and motivational factors might be more important influences in initiating "loss-of-control" drinking than the direct effects of alcohol (e.g., Merry, 1966; Paredes, Hood, Seymour, & Gollob, 1973; Sobell, et al., 1972).

In what is considered to be a classic experiment conducted by Marlatt, Demming, and Reid (1973), the validity of the loss of control assumption was tested more fully. Non-abstinent alcoholics and social drinkers were recruited to take part in a "taste-rating" task in which they were led to believe they would be rating the taste qualities of alcoholic and non-alcoholic beverages along a number of dimensions. The participants were assigned to one of four conditions in a 2×2 experimental design that has become known as the "balanced placebo design". One condition manipulated the content of the beverage that the individual would taste. In half the cases, the beverages contained a mix of vodka and tonic in a ratio that could not be reliably identified as containing alcohol; the other half of the beverages contained no alcohol. The second condition manipulated what the individuals were told about the beverage content. In half the cases, they were told that the beverage contained alcohol; in the other, they were told that it was tonic and contained no alcohol.

If the loss of control phenomenon is operative as incorporated into the disease model, then individuals, especially the alcoholics, should drink more when the beverage contains alcohol, independent of their beliefs about the contents. This is predicated on the assumption that the consumption of alcohol would trigger the underlying physiological addictive process, which in turn would increase craving, resulting in continued drinking. However, the results failed to support this assumption. Regardless of whether alcoholic or social drinker, individuals who were told that the beverage contained alcohol (regardless of its actual content) consumed nearly twice as much beverage as did those who were told the beverage contained no alcohol.

While alcoholics consumed more beverage than social drinkers, participant classification did not interact with either beverage content or instructional set. A similar pattern was found on a number of other measures. Being told that the beverage contained alcohol, regardless of its actual content and regardless of whether an alcoholic or social drinker, was associated with more beverage being consumed per sip and with participants' post-drinking estimates of the percent of alcohol contained in the beverages. Further, for those conditions in which the beverage actually contained alcohol, participants who were told that they were consuming alcohol had significantly higher estimated blood alcohol levels than those led to believe that the beverage did not contain alcohol; this difference in estimated BACs was particularly large for the alcoholic group.

This experiment was significant for a number of reasons. First, on a methodological level, it introduced the balanced placebo design (see George, et al., this volume, for more details about the balanced placebo design). This design (Marlatt & Rohsenow, 1980; Rohsenow & Marlatt, 1981), which is still considered to be a novel approach (Enck, Klosterhalfen, & Zipfel, 2011), has been generalized beyond its original use with alcohol to include other substances such as caffeine (Lotshaw, Bradley, & Brooks, 1996), nicotine (Juliano & Brandon, 2002), and marijuana (Metrik et al., 2009).

Second, the results derived from the balanced placebo highlight the prominent role that cognitive expectancies play in determining alcohol consumption of both alcoholics and social drinkers. These expectancies, rather than the physiological effects of alcohol, appeared to govern their drinking behavior. These findings, important in their own right, also contributed to the then emergent focus on the role that expectancies and other cognitive and social learning factors play in the etiology and maintenance of alcohol problems (Brown, Goldman, Inn, & Anderson, 1980; Donovan & Marlatt, 1980; Goldman, Brown, & Christiansen, 1987; Marlatt & Donovan, 1981, 1982). They also provided the initial seeds for the concept of the Abstinence Violation Effect (AVE). Since many alcoholics who have achieved a period of abstinence do drink heavily following an initial drink, and if such continued drinking is not driven by physiological mechanisms but rather expectancies, then there must be some cognitive-expectational mechanism involved. The AVE suggests that to the extent that an individual is committed to a goal of abstinence and then drinks, this strongly held commitment is broken, leading to a sense of guilt and a personal attribution of failure and blaming oneself for the slip. It is hypothesized that it is this emotional reaction of guilt and self-blame in response to violating one's commitment that leads to the continued drinking. Continued drinking by an alcoholic might also be the result of the individual

believing that one drink leads to a drunk, despite research evidence to the contrary.

A third major contribution of this study is that the results failed to support and directly challenged the disease concept of alcoholism and the absolute goal of abstinence (Pomerleau, Pertschuk, & Stinnett, 1976). One drink was found to not necessarily lead invariably to a drunk. Rather than being a physiologically regulated process, individual difference variables that are potentially malleable, such as expectancies and environmental factors, had a greater impact on drinking behavior. The implications of this were profound on many levels. The findings suggested that if one takes a drink, even after a period of abstinence, it did not necessarily lead to uncontrolled, unstoppable drinking. Taken together, the findings suggested that since loss of control is not an inevitable outcome of taking a drink, it might be possible to prevent future drinking by modifying these malleable factors. This notion also represented a nascent step toward the subsequent distinction Alan would make between a “lapse” and a “relapse”. The results also challenged the need for absolute abstinence, a finding that entered into the emergent controlled drinking debate (Sobell & Sobell, 1995), opened the door for the possibility of non-abstinent treatment goals (Miller & Caddy, 1977), presaged the development of harm reduction approaches (Marlatt, 1998; Marlatt & Witkiewitz, 2002) (also see the article by Blume, this volume) and subsequent relapse preventive strategies that could accommodate moderation goals (Larimer & Marlatt, 1990).

In addition to its impact on the treatment field, the impact of this seminal research also was highlighted by a number of honors. The article by Marlatt et al. (1973) was featured as a “Citation Classic” in 1985 by *Current Contents: Social and Behavioral Sciences*; it was also featured as a “Seminal Article in Alcohol Research” in a special 1995 edition of *Alcohol Health and Research World* for the 25th Anniversary of the National Institute on Alcohol Abuse and Alcoholism.

LEG 2. CLINICAL OBSERVATIONS AND RESEARCH FINDINGS: IDENTIFYING DETERMINANTS OF RELAPSE

Despite the findings challenging a number of tenets of the disease model of alcoholism, one tenet of this model still held true, namely the high rates of relapse across a variety of addictive behaviors. Hunt, Barnett, and Branch (1971), pooling the results from 84 studies, demonstrated that individuals addicted to alcohol, heroin, or tobacco/nicotine were highly likely to relapse within the first 90 days after stopping their use of these substances. Only about 40% of the individuals were still abstinent at the end of 3 months. The relapse curves were remarkably similar across alcohol, tobacco, and heroin, suggesting that there might be commonalities in the factors

contributing to relapse across different drugs of abuse. It appeared, however, that if one were able to remain abstinent across this 90-day period, the probability of relapsing subsequently dropped off considerably. Hunt et al. (1971), deriving a clinical implication from this finding, indicated that the high rates of relapse suggested that the then current treatment approaches were either too brief or inefficient to produce lasting effects and that the majority of individuals would benefit from further supportive or booster therapy following completion of formal treatment.

At about the same time that Hunt et al. (1971) were aggregating research studies on relapse, Alan was in the process of trying to better understand the factors associated with relapse by interviewing patients who had been successful in an abstinence-oriented treatment program but who subsequently relapsed within 90 days of their treatment completion. As he and colleagues reviewed this qualitative data, a pattern of interpersonal and intrapersonal factors began to emerge as individuals described the circumstances surrounding their return to drinking. Over time, these initial clinical observations were formalized through content analysis into a classification scheme of situational factors and emotional states that immediately preceded a relapse (Cummings, Gordon, & Marlatt, 1980; Marlatt, 1978; Marlatt & Gordon, 1980). The resultant taxonomy of high-risk relapse situations consisted of eight subcategories within two broader domains. The first domain, *Intrapersonal/Environmental Determinants*, included: (a) coping with negative emotional states such as frustration, anger, and depression; (b) coping with negative physiological or physical states; (c) enhancing positive emotional states; (d) testing personal control or one’s will power using a substance; and (e) giving in to temptations, urges, or desire to use. The second domain, *Interpersonal Determinants*, consisted of (a) coping with interpersonal conflict; (b) social pressure to use; and (c) enhancing positive emotional states in the context of interpersonal or social interactions.

Given the finding by Hunt et al. (1971) about the similarity of relapse rates across substances of abuse, Cummings et al. (1980) used this classification scheme to evaluate the determinants of relapse among alcoholics, smokers, heroin addicts, gamblers, and uncontrolled eaters. The classification system was successful in capturing the high-risk relapse situations of these diverse groups of substance abusers and individuals with behavioral addictions, as well as pointing to variations in the pattern of the determinants related to each disorder. In addition to serving as one of the main components of the RP model, the taxonomy of relapse determinants also has led to the development of a number of clinically useful assessment instruments that evaluate the perceived risk, level of temptation, and the individual’s confidence of dealing effectively without drinking or using drugs in such high-risk situations

(Annis & Graham, 1988, 1991; Annis, Graham, & Davis, 1987; Annis & Martin, 1985; Annis, Sklar, & Turner, 1997; Zywiak, Connors, Maisto, & Westerberg, 1996; Zywiak et al., 2001).

Alan and colleagues reasoned that if these high-risk situations could be identified and if individuals could be trained to anticipate them in advance and either avoid or cope more effectively with them if encountered, the likelihood of relapse could be reduced. This was the genesis of RP therapy and one of the cornerstones of the RP theoretical model.

LEG 3. THE FOUNDATIONAL CLINICAL TRIAL OF RP: SKILLS TRAINING WITH ALCOHOLICS

The theoretical assumptions underlying the emergent RP model were first tested in a study conducted by Chaney, O'Leary, and Marlatt (1978). The study was predicated on one of the major tenets of the RP model, namely that alcoholics were deficient in the social skills necessary to cope effectively with stressful or other high-risk situations (O'Leary, O'Leary, & Donovan, 1976). The clinical corollary of this was the belief that training alcoholics in appropriate coping skills would reduce the likelihood of relapse and improve overall treatment outcome. The focus on attempting to help patients learn new adaptive behaviors through skills training approaches was relatively novel in general and had minimal application or evaluation with problem drinkers or alcoholics at that point in time. The study addressed two basic questions. First, can alcoholics' become more effective in responding to high-risk situations, if provided specific training in adaptive coping skills? Second, if alcoholics do acquire more effective coping and problem-solving skills through such training, does it have the assumed positive effect on reducing subsequent drinking behavior?

The situations targeted for assessment and training were based on the high-risk relapse situations identified by Alan (Marlatt, 1978) and were augmented with others suggested by treatment staff and patients. A pool of 80 situations was generated and each situation was rated by a group of patients with respect to the difficulty each would present if encountered. From this process, the eight most difficult situations in four domains were selected. The domains were consistent with Alan's relapse situations taxonomy: (a) frustration and anger; (b) interpersonal temptation; (c) negative emotional state; and (d) intrapersonal temptation. Half of the situations were used as stimuli in the training process. The others constituted one of the primary assessment procedures, the Situational Competency Test (SCT), which was administered both at baseline and following the treatment phase. Individuals were presented with hypothetical high-risk relapse situations and asked to respond verbally as they actually would if encountering each situation. Their responses were

audiotaped and behaviorally rated by trained judges for both general and drink refusal-specific skill. Objective measures (e.g., latency to respond, length of response) and observer-rated skillfulness or adequacy of the response to resolve the situation without drinking were assessed.

Rather than training participants in skills to a set of specific high-risk situations, the focus was on the development of problem-solving skills that could be applied across a variety of situations. Using instruction, modeling, role playing, and coaching, individuals in the intervention group were trained to use the general problem-solving steps of problem definition and formulation, generation of alternatives, and decision making. Both the actual optimal solutions to the high-risk situation and the cognitive process for generating the response were rehearsed. This intervention, which was delivered in 8 biweekly 90-min sessions in a small group format, was compared to two comparison conditions. The first was a discussion control group in which the same high-risk situations were discussed, but no behavioral training techniques were employed. The second comparison condition was comprised of patients in the same intensive combined inpatient and day treatment program, who received treatment as usual without the addition of either the discussion or skills training incorporated.

The results of the study supported the primary hypotheses. The acquisition of adaptive coping skills was evaluated using objective measures derived from the SCT from baseline to the end of the active treatment phase and a 3-month follow-up. Patients in the skills training group had significantly longer durations of responses (e.g., number of words in the response) than either comparison group at the end of the active intervention phase. Members of the skills training group also had significantly greater specification of new/alternative behaviors (e.g., the degree to which the detail in the person's description of the problem-solving behavior to be performed in a high-risk situation was sufficient so that someone else could use the description as a guide to perform the behavior) than either comparison group both at the end of treatment and still better than the discussion control group at the 3-month follow-up. The evidence supports the tenet of the RP approach that individuals can become more effective in responding to high-risk situations if provided specific training in adaptive coping skills.

The results also indicated that patients in the skills training group, compared to the two control groups whose data were pooled, had significantly fewer days drunk (11.0 *versus* 64.0 days), fewer drinks (399.8 *versus* 1592.8 drinks), and shorter durations/length of drinking periods (5.1 *versus* 44.0 days) over the 12-month post-treatment follow-up. Thus, the skills training group had 1/6th the average number of days drunk, 1/4th the number of drinks, and an average drinking

period length less than 1/8th as long as the combined comparison groups.

As important, and consistent with the second question the study was designed to address, it was found that improvement in social skills assessed by the SCT at the post-treatment assessment was predictive of a number of drinking outcomes. In particular, the response latency measure, which reflects the ability to quickly generate an alternate response to drinking in a high-risk situation, was most predictive. Patients with shorter latencies were employed more, had more days in continuing care and fewer days hospitalized, more days of abstinence, fewer days drunk, a smaller number of drinks consumed, and shorter periods of drinking.

The Chaney et al. (1978) study is important historically for a number of reasons. First, it served as the first and one of the primary early empirical cornerstones for testing and supporting Alan's RP theory and RP therapy. It provided evidence that it is possible to train alcoholics in more adaptive methods of coping and problem solving when confronted with high-risk situations, that individuals who received this training had significantly better treatment outcomes, and that these improved outcomes are mediated by increased social competence and coping abilities. Second, the Situational Confidence Test has served as a prototype for a number of similar behavioral analog assessments with alcohol and drug-dependent individuals (e.g., Chaney et al., 1978; Hawkins, Catalano, & Wells, 1986; Monti, Gulliver, & Myers, 1994; Monti et al., 1993; Schmitz, Oswald, Damin, & Mattis, 1995; Wells, Catalano, Plotnick, & Hawkins, 1989), evaluating the type of coping strategies employed (e.g., active cognitive, active behavioral, avoidance, help-seeking) and objective response parameters (latency, duration, specification, compliance) in response to potential high-risk relapse situations. Third, the study stimulated subsequent research to evaluate further the efficacy of skills training approaches with alcohol and substance abuse patients (Kadden et al., 1992; Kadden & Penta, 1995; Longabaugh & Morgenstern, 1999; Monti et al., 1994; Monti & O'Leary, 1999; Monti, Rohsenow, Colby, & Abrams, 1995; Monti, Rohsenow, Michalec, Martin, & Abrams, 1997).

THE PRELUDE

Building on the findings that loss of control is not inevitable if an alcoholic takes an initial drink (Marlatt et al., 1973), that it was possible to identify and reliably categorize relapse determinants and high-risk situations (Cummings et al., 1980; Marlatt, 1978; Marlatt & Gordon, 1980), and that improving coping skills reduces subsequent drinking (Chaney et al., 1978), the foundation for the RP model was set. A series of papers presented the initial formulation of the RP model, both on a theoretical level and with respect to its clinical implications (Cummings et al., 1980; Marlatt, 1978; Marlatt & George, 1984; Marlatt &

Gordon, 1980). The model, in its simplest form, suggests that if an individual encounters high-risk situations for which he or she does not have available adequate or appropriate coping skills to deal with the situational demands, then he or she will experience a decrease in self-efficacy, the salience of the anticipated positive outcomes of substance use will increase, and relapse is more likely to occur. The goal of RP is to provide individuals with the necessary coping skills to successfully navigate through such situations without relapsing.

These early empirical studies and preliminary formulations led up to and contributed to the classic 1985 Marlatt and Gordon edited book, *Relapse prevention: Maintenance strategies in the treatment of addictive behaviors* (Marlatt & Gordon, 1985), which articulated this theoretical model more fully and provided guidance about its clinical application across a number of different addictive behaviors.

ADOPTION AND CLINICAL APPLICATION OF THE RP MODEL

The impact of the RP model in the substance abuse field following the publication of the 1985 RP book was rapid. The publication came at a time when cognitive-behavioral alternatives to the disease model of alcoholism and addiction were beginning to emerge. There was a changing climate, a *zeitgeist*, in which a number of assumptions of the traditional conceptual models and resultant treatment approaches were being challenged, not without controversy, conflict, and considerable territorial defensiveness. However, such challenges and debates, in which dissonance is raised and leads to an evaluation of the pros and cons of divergent perspectives and assumptions, often serve as a source of motivation to change (Miller & Rollnick, 1991), resulting in quantum change (Miller, 2004) and paradigm shifts (Kuhn, 1970). The basic assumptions of the RP model that alcoholics and other substance abusers could potentially prevent relapse, improve treatment outcomes, and reduce the duration and negative consequences of a drinking or drug use episode, if it did occur provided a sense of hope that had been absent from the treatment field. Clinicians were eager to adopt and incorporate the underlying model and the treatment strategies that flowed from it.

There were other models of relapse and RP that were developing in this same time period (Connors, Maisto, & Donovan, 1996; Donovan & Chaney, 1985), most notably that presented by Gorski (1986) and Gorski and Miller (1979, 1986). This model appealed to counselors because it maintained and integrated a number of disease model constructs such as a neurologically based consequence of chronic drinking called the "post acute withdrawal (PAW) syndrome", which manifests itself after 1–2 weeks following cessation of drinking, peaks after 1–1/2 months and subsides over the next 3 months. This persistent sub-threshold

withdrawal process increases the risk of relapse and helps trigger a chain of attitudinal and behavioral changes that serve as warning signs of the individual “building up to drink”. While appealing and popular with many counselors, Gorski’s model has had limited scientific evaluation (Bennett et al., 2005; Miller & Harris, 2000).

The model presented by Marlatt and Gordon gained prominence both because of its empirical support (e.g., what is now called an evidence-based practice) and its clinical applicability. An important step in the dissemination process was the work of Dennis Daley, which has always been client-focused and treatment-directed (Daley, 1986, 1988, 1989, 1998; Daley & Lis, 1995; Daley & Marlatt, 1992, 1997). Having initially read Alan’s formulations of the RP model in the early 1980s, and as a result of Alan’s influence and their subsequent collaboration, Daley became highly involved in RP both in terms of developing clinical programs and interventions and disseminating information from Alan’s work (as well as that of others in the area of RP) via writings, videos, and teaching. A drawback of the RP model as presented in the 1985 text was that while it suggested a number of therapeutic strategies that could be used in clinical practice, there was no systematic manualized set of procedures, although the social skills manual developed and evaluated by Chaney was available. Daley (1986) wrote the first workbook for patients, entitled *Relapse Prevention Workbook: For Recovering Alcohol & Drug Dependence Persons*, which operationalized many of Alan’s concepts and framework on high-risk factors and was written to help patients become more educated and skillful in dealing with relapse issues. This workbook has since been updated several times (most recently in 2011) and is a widely used patient recovery guide for programs in the US, Canada, and Europe. This was followed shortly thereafter by the first patient educational video on RP, entitled *Staying Sober, Keeping Straight* (produced by Gerald T. Rogers Production, Skokie, Ill.). This video, which showed “vignettes” of relapse issues and RP in action, was used in many treatment programs in the US and other countries. Several years later, a video showing examples of individuals using RP strategies in their recovery was developed for therapists as part of a “Mentor” series for clinicians on select clinical topics.

Daley also developed a manual for therapists that provided background information about the RP model and a detailed curriculum for a 12-session group-based RP intervention that was used with the accompanying interactive workbook for clients (Daley, 1986). This intervention was implemented initially in an inpatient rehabilitation program; it has subsequently been adapted and used in detoxification, therapeutic community, halfway house, intensive outpatient, outpatient, and aftercare settings with individuals dependent on a variety of different substances (Daley & Douaihy, 2011). Many of Daley’s publications targeted and were

published in journals for social workers, counselors, and other treatment providers (Daley, 1987, 1988; Daley & Lis, 1995). Alan and Dennis worked together on a number of book chapters and books over the years (Daley & Marlatt, 1992, 1997), a tremendous combination and blending of a brilliant theoretician and a skilled practitioner and program implementer. The most recent edition of the counselor manual (Daley & Douaihy, 2011), which was published in the summer of 2011, is dedicated to Alan.

Subsequently, a number of other manuals that incorporated social skills training and other cognitive-behavioral components of the RP model have been published, including those by Monti and colleagues (Monti, Abrams, Kadden, & Cooney, 1989; Monti, Kadden, Rohsenow, Cooney, & Abrams, 2002) and the Project MATCH research group (Kadden et al., 1992) focusing on alcohol dependence and by Carroll (1998) for use with cocaine-dependent individuals. The National Institute on Drug Abuse (NIDA), in addition to publishing Carroll’s manual, also has one of its Research Dissemination and Application Packages devoted to RP. Among the materials included in this package, published in 1993, is an introduction to RP, a handbook for program administrators that discusses issues involved in implementing a RP program, and an in-service training curriculum for counselors.

The Substance Abuse and Mental Health Services Administration’s (SAMHSA) Center of Substance Abuse Treatment (CSAT) has published manuals on RP approaches for use with chemically dependent individuals in the criminal justice system and group-based RP interventions for older adult substance abusers. The work of CSAT’s network of regional Addiction Technology Transfer Centers has also been instrumental in the training of front-line counseling staff and the dissemination and implementation of RP approaches in a variety of treatment settings throughout the US.

In coming nearly full circle, Hunt and colleagues over 40 years ago indicated that the relapse curves they found across substances suggested that the then current treatment approaches were either too brief or inefficient to produce lasting effects and that the further supportive or booster sessions following completion of formal treatment would be potentially beneficial (Hunt et al., 1971). Over the more recent past, there has once again been a focus on alcohol and drug dependence as chronic conditions (McLellan, 2002; McLellan, Lewis, O’Brien, & Kleber, 2000), with the implication that a chronic-disease management approach that provides some form of continuing care is needed to monitor and adequately address the fluctuations in symptom manifestations across time. Continuing care for substance use disorders is very consistent with and incorporates elements of a RP approach, given its emphasis on the maintenance of behavior change and the development of a balanced and healthy lifestyle (Donovan, 1998; Ito & Donovan, 1986; Ito, Donovan, & Hall, 1988;

McKay, 2006; McKay et al., 2009). While often individuals are trained in and initially acquire relapse-reducing coping skills during the course of a treatment episode, it is after leaving treatment that these skills will be more fully practiced, consolidated, and also put to the test as the individual encounters potential high-risk situations in his or her daily life. It is often after treatment that the effects of RP efforts begin to emerge. The addition of periodic monitoring of how one is doing and focusing on relapse “warning signs” (Stout, Rubin, Zwick, Zywiak, & Bellino, 1999), quarterly recovery management checkups to assess current status and provide rapid linkage to care if needed (Scott & Dennis, 2009; Scott, Dennis, & Foss, 2005), and ongoing continuing care services, the intensity/frequency of which is adjusted based on clients’ changing clinical needs (McKay, 2005, 2006), are all ways to facilitate long-term client engagement, extend the benefits of treatment, reduce the likelihood of relapse, and intervene more rapidly if relapse does occur.

RP 2005–2011

In preparing the first chapter of the second edition of the Marlatt and Gordon classic text on RP, it became clear that there was a drastic shift in the attitude toward relapse in the 20 years since the first edition. One of the most important advances since 1985 was the acknowledgement that a “lapse” was not necessarily equivalent to a “relapse”, where lapses are defined as a single transgression of a problematic behavior and relapse has been defined as a process of change (Witkiewitz & Marlatt, 2007a, b). Several authors have discussed the clinical course of substance use disorders as being highly heterogeneous between and within individuals over time (Genberg et al., 2011; Maisto, Clifford, Stout, & Davis, 2007; McKay, 2009; Witkiewitz, Maisto, & Donovan, 2010). For example, Genberg et al. (2011) studied the course of injection drug use across 20 years in a community sample of injection drug users in the Baltimore area and found that 32% of individuals were persistent drug users over the 20 years, 16% had frequent lapses intertwined with periods of abstinence, and 53% ceased drug use and maintained abstinence. Witkiewitz and Masyn (2008) examined alcohol trajectories for a year following treatment and found that 30% of individuals abstained from drinking for the entire year. Among those who did have a lapse, only 6% continued to engage in heavy drinking for the year following treatment, whereas 82% drank infrequently and 12% engaged in heavy drinking for a few months before returning to abstinence or light drinking near the end of the 1-year follow-up.

These examples and the two decades of research preceding the publication of the RP text in 2005 provide strong support for the notion of relapse as a process, rather than a discrete event. Following up on this notion, Marlatt and Witkiewitz began to work on a

revised model of relapse as a dynamic process. The hypothetical dynamic model of relapse advanced the notion that the relapse process could be predicted from the interaction between background risk factors (e.g., family history) and contextually bound factors that change dynamically in the moment (e.g., negative affect). Initially proposed in 2004 (Witkiewitz & Marlatt, 2004), the dynamic model of relapse was derived from the principles of non-linear dynamical systems theory. Specifically, it was proposed that the course of substance use following a period of abstinence or reduced use could be modeled as a non-linear dynamical system. Subsequently, several empirical studies provided evidence in support of a non-linear dynamical systems approach to analyzing the alcohol relapse process (Hufford, Witkiewitz, Shields, Kodya, & Caruso, 2003; Witkiewitz & Marlatt, 2007a, b; Witkiewitz, van der Maas, Hufford, & Marlatt, 2007; Witkiewitz & Villarroel, 2009).

Enthusiasm for the dynamic model of relapse (Hunter-Reel, McCrady, & Hildebrandt, 2009; Stanton, 2005) has led to several new research studies that are currently in progress or in the planning stages. For example, William Shadel and colleagues (NIH grant no. R01-CA127491) are examining whether the dynamic model can be used to explain the transition from an experimentally manipulated smoking lapse to regular smoking following a period of abstinence. Stephen Maisto and colleagues (NIH grant no. R01-AA017701) are examining the interaction among interpersonal stress, affect regulation, and alcohol use in a dynamic model of relapse. Likewise, proposed studies to expand the statistical methodology for examining relapse as a dynamical system and to evaluate relapse as a dynamical system within the context of momentary assessment data are currently under review at NIH.

The second edition of RP also discussed the application of RP principles and techniques to diverse populations (Blume & de la Cruz, 2005) and non-substance using high-risk behaviors (Collins, 2005; Zawacki, Stoner, & George, 2005). The original cognitive-behavioral model of relapse was largely based on the experiences of 70 white males who received treatment for alcohol dependence (Marlatt, 1978); thus, it was important to examine whether the model and treatment could be expanded to individuals who were from a different ethnic/racial background, females, and to other high-risk behaviors.

Blume and de la Cruz (2005) noted that more research needs to be done evaluating the efficacy of RP among ethnic minority communities and also advocated for examining the biopsychosocial model of relapse within different cultures. The authors also noted that many aspects of the RP model might be appealing to ethnically and racially diverse cultures and small adaptations may be sufficient to provide culturally tailored care. For example, Simmons, Cruz, Brandon, and Quinn (2011) recently adapted a smoking

RP program for pregnant and postpartum women, which was originally tailored for non-Hispanic women, to a sample of pregnant and postpartum Hispanic women. The multi-stage project identified three major areas that required program modification in order to be tailored to the concerns of Hispanic women, namely the lack of concern for weight gain, the importance of family approval, and attention to the stress associated with immigration experiences. Similarly McNair (2005) noted that RP for African American clients would benefit from an increased focus on triggers related to racism and racial discrimination, which often pose a high-risk situation for African Americans. Another recent study found that some RP skills, namely drink refusal skills training, may be more beneficial to African American clients than non-Hispanic white clients (Witkiewitz, Villarroel, Hartzler, & Donovan, 2011). It is noteworthy that cultural influences were not incorporated into the original model of relapse proposed by Marlatt and Gordon (1985), nor were they included in the revised dynamic model of relapse (Witkiewitz & Marlatt, 2004). Future research should be conducted to examine the influence of cultural factors (for both majority and minority cultures) on the relapse process (Blume & de la Cruz, 2005).

Another population that has been the focus of adaptations to RP is among adolescents (Liddle & Rowe, 2006). It has been estimated that approximately 80% of adolescents return to some level of substance use within the first 6 months after community-based substance abuse treatment (Brown, D'Amico, McCarthy, & Tapert, 2001). Ramo, Myers, and Brown (2007) adapted both the model of relapse and the RP intervention for the treatment of adolescents with substance use disorders. The "youth addiction relapse model" (p. 297) (Ramo et al., 2007) expands on the original cognitive-behavioral model of relapse by incorporating motivational issues, neurocognitive development, psychiatric comorbidity, information processing patterns, and environmental constraints that are all specific to adolescent populations. Ramo et al. (2007) also noted an increased need for family involvement, initially to help the therapist identify family-level high-risk situations and in the latter part of treatment, to incorporate the family into reinforcement/punishment contingency planning and into discussions of lifestyle balance.

RP was initially targeted explicitly for the treatment of alcohol and other drug problems. However, as Alan (Marlatt & Gordon, 1985) noted early on, the RP model may have applications that extend beyond the traditional categories of substance use disorders: "Habit patterns such as excessive drinking, smoking, overeating, or substance abuse may be considered as a subclass of a larger set of what we refer to as addictive behaviors. The category of addictive behaviors may be expanded to include any compulsive habit pattern in which the individual seeks a state of immediate

gratification" (pp. 3–4). The concept has been expanded further to focus on strategies facilitating the maintenance of change in a broad range of behaviors. Consistent with this expanded scope, the RP model has since been extended to the treatment of sexual offending (Laws, 1989; Laws, Hudson, & Ward, 2002), eating disorders (Collins, 2005), and a number of other health behaviors. A particularly novel early adaptation was done by Marx (1982, 1986), an organizational psychologist, who applied the RP model to the acquisition and maintenance of adaptive managerial behaviors in the business world.

Today, the term "RP" is ubiquitous in the addiction, mental health, and behavioral health fields (e.g., entering the term "RP" into PubMed resulted in 39,678 entries), and aspects of the original model of relapse are incorporated into psychological treatments for numerous behaviors and disorders (Witkiewitz & Marlatt, 2007a, b). The 2005 RP book (Marlatt & Donovan, 2005) also described RP techniques for obesity and eating disorders (Collins, 2005), gambling (Shaffer & LaPlante, 2005) and sexual risk taking (Zawacki et al., 2005). Witkiewitz and Marlatt (2007a, b) expanded the scope of RP even further in the edited book, titled "Therapist's Guide to Evidence-Based RP", which incorporated chapters on the treatment of depression (Lau & Segal, 2007), generalized anxiety disorder (Whiteside et al., 2007), schizophrenia (Ziedonis, Yanos, & Silverstein, 2007), post-traumatic stress disorder (Najavits, 2007), eating disorders (Schlam & Wilson, 2007), and self-injurious behavior (Brown & Chapman, 2007).

RESEARCH ON RP

To date, there have been numerous meta-analyses and narrative reviews that have either explicitly examined the efficacy and effectiveness of "RP" (Agboola, McNeill, Coleman, & Leonardi Bee, 2010; Carroll, 1996; Hajek, Stead, West, Jarvis, & Lancaster, 2009; Irvin, Bowers, Dunn, & Wang, 1999) or have examined treatments that incorporate components of RP (Magill & Ray, 2009; McCrady, 2000; Miller & Wilbourne, 2002). Based on this research and other studies RP is currently identified as an evidence-based program by the United State SAMHSA National Registry of Evidence-Based Programs and Practices (<http://nrepp.samhsa.gov>, last accessed 9/7/2011).

In one of the earliest studies, Carroll (1996) conducted a narrative review of controlled clinical trials evaluating RP in the treatment of smoking, alcohol, and other drug use. Across substances, RP was found to be generally effective compared with no treatment and as good as other active treatments. One interesting finding was that some RP treatment outcome studies identified sustained main effects for RP, suggesting that RP may provide continued improvement over a longer period of time (indicating a "delayed emergence effect"), whereas other

treatments may be effective over only a shorter duration. This delayed emergence effect is consistent with the skills acquisition basis of the RP approach. As with learning any new skill, clients become more experienced in acquiring and performing the skill, leading to overall improvements in performance over time.

Irvin et al. (1999) conducted a meta-analysis on the efficacy of RP techniques in the improvement of substance abuse and psychosocial outcomes. Twenty-six studies representing a sample of 9504 participants were included in the review, which focused on alcohol use, smoking, polysubstance use, and cocaine use. The overall treatment effects demonstrated that RP was a successful intervention for reducing substance use and improving psychosocial adjustment. Although these results are promising, as noted in a recent review by Hendershot, Witkiewitz, George, and Marlatt (2011), since RP has evolved into a general term for interventions that aim to prevent relapse, it is fairly difficult to systematically evaluate the efficacy and effectiveness of RP, as originally described by Marlatt and Gordon (1985).

Notably, cognitive-behavioral treatment manuals for a variety of psychological disorders incorporate components of the original model of relapse put forward by Marlatt and Gordon (1985). In a recent meta-analysis by Magill and Ray (2009), who evaluated 53 controlled trials of CBT for substance use disorders, the authors noted that the CBT studies evaluated in their review were based on the RP model. Overall, the results from their meta-analysis were consistent with the review conducted by Irvin and colleagues, with 58% of individuals who received CBT having better outcomes than those in comparison conditions. Furthermore, treatments that were ranked among the top 10 of treatments for alcohol use disorders based on treatment effect sizes and methodological quality (Miller & Wilbourne, 2002), including brief interventions, social skills training, community reinforcement, behavioral contracting, behavioral marital therapy, and self-monitoring, incorporate aspects of RP and are largely based on a cognitive-behavioral model of relapse. It is noteworthy that since the passing of Alan Marlatt, the developers of some of the most effective treatments for substance use disorders have spoken candidly about Alan's influence on their work and the field of addictive behaviors. Some informally *via* email and discussion at conferences, others have spoken out formally in the writing of obituaries in prominent journals. McCrady (2011) noted that "Marlatt's RP model dramatically changed the way the treatment community conceptualized relapse" (p. 1015).

RP 2012 AND BEYOND

As noted in an obituary for Alan Marlatt by Miller and McLellan (2011) "He departed suddenly and too soon", which is evident in the fact that he was still

actively conducting research, accepting graduate students, and applying for new research funding. Just prior to his passing, he was in the process of completing a randomized controlled trial evaluating the efficacy of RP and mindfulness-based RP in comparison to standard aftercare for the treatment of substance use disorders (This is discussed further in the article by Bowen, this volume). In many ways, this final study represented the culmination of Alan's work over the past 30 years in that he was initially interested in the effects of meditation on substance abuse in the late 1970s, devoted much of his career through the 1980s and 1990s to disseminating RP, and then developed mindfulness-based RP in the 2000s. Preliminary results from that trial look promising and suggest that RP and mindfulness-based RP are both more efficacious than standard aftercare. Interestingly this trial, which would be Alan's last research project, was the first randomized controlled trial evaluating the efficacy of RP conducted within Alan's laboratory. Thus, Alan proposed the RP intervention, but never evaluated the intervention within the context of a randomized trial until his final days. His lack of direct control over prior studies of RP eliminated the potential experimenter bias that can come when several trials of a particular treatment are conducted within the same laboratory.

Fortunately, many other researchers are continuing Alan's work. A quick search of the National Institutes of Health grant database (<http://projectreporter.nih.gov>, last accessed 9/7/2011) identified the keyword "RP" in 106 currently funded research studies. With research topics that vary from RP delivered using virtual reality technology (R42AA014312, Bordnick, PI) to RP booklets for tobacco cessation (R01CA137357, Brandon, PI) to the development of RP interventions for pregnant drug abusers (R01DA014979, Chisolm, PI) and postpartum tobacco users (R01CA140310, Danaher, PI). Interestingly, a good deal of recently funded RP research focuses on animal studies of addictive behavior processes and pharmacotherapy. Alan was publicly skeptical of animal models of relapse (Marlatt, 2002) most notably for the lack of external validity in animal models of drug use "reinstatement", which often does not involve voluntary goal-directed behavior toward obtaining an addictive substance. He was also concerned about over-reliance on pharmacotherapy, noting that behavioral relapse processes require behavioral intervention to produce enduring change. It is of note in this regard that the COMBINE study, (Anton et al., 2006), while demonstrating the efficacy of naltrexone on reducing drinking during the active treatment phase, found an emergent effect for the Combined Behavioral Intervention (CBI), which incorporated a number of components from RP, during the follow-up period (Donovan et al., 2008); participants who had received CBI, regardless of their medication condition, were approximately 20% more likely to have had a good clinical outcome over the 1-year post-treatment period than individuals who did

not receive CBI. Near the end of his career, Alan observed these changes at the same time that he observed fewer behavioral studies of human relapse being funded by the National Institutes of Health. Nonetheless, a number of individuals including numerous former students and friends of Alan are still committed to human research. In the words of Alan, we hope that the currently funded studies will “Bridge the gap between animal and human models of drug use and highlight the significance of both behavioral and environmental determinants of relapse” (Marlatt, 2002, p. 359).

SUMMARY AND CONCLUSIONS

The influence of RP on the treatment of addictive behaviors and on our thinking about relapse is beyond measure. Yet, it takes a retrospective to appreciate the sea change in beliefs that were brought about by Alan Marlatt's tireless devotion to the prevention of relapse. Alan worked throughout his entire career promoting the scientific study of addiction, trying to provide hope to those with addictive behaviors, disseminating RP, and spending countless hours training fellow clinicians and his students. The clinicians that he trained will continue to implement RP with their clients and will provide training to future clinicians. Alan's students will continue to push the field forward and will also train the next generation of addictive behaviors researchers. We have seen and been part of a quantum change in the addictions, led by a true visionary and luminary in the field. We will continue to move forward, since we have learned how to successfully prevent falling back.

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