Team Awareness for Workplace Substance Abuse Prevention: The Empirical and Conceptual Development of a Training Program

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This paper describes the empirical and theoretical development of a workplace training program to help reduce/prevent employee alcohol and drug abuse and enhance aspects of the work group environment that support ongoing prevention. The paper (1) examines the changing social context of the workplace (e.g., teamwork, privacy issues) as relevant for prevention, (2) reviews studies that assess risks and protective factors in employee substance abuse (work environment, group processes, and employee attitudes), (3) provides a conceptual model that focuses on work group processes (enabling, neutralization of deviance) as the locus of prevention efforts, (4) describes an enhanced team-oriented training that was derived from previous research and the conceptual model, and (5) describes potential applications of the program. It is suggested that the research and conceptual model may help prevention scientists to assess the organizational context of any workplace prevention strategy. The need for this team-oriented approach may be greater among employees who experience psychosocial risks such as workplace drinking climates, social alienation, and policies that emphasize deterrence (drug testing) over educative prevention. Limitations of the model are also discussed.

KEY WORDS: substance abuse; workplace; training; theory.

National surveys estimate that 1 in 10 employees report problems with drinking or illicit drug use (Substance Abuse and Mental Health Services Administration [SAMHSA], 1996, 1999) while as many as one in three co-workers report being affected by such use (Institute for a Drug-Free Workplace, 1997; Lehman, Farabee, & Bennett, 1998). That is, one troubled or poorly performing employee can have collateral effects on co-workers. Job problems that stem from substance abuse are often framed in terms of individual costs—absenteeism, accidents, poor performance, and turnover (Lehman & Simpson, 1992;

Normand, Lempert, & O'Brien, 1994). However, colleagues experience relational costs such as lowered morale and poor communication (Bennett & Lehman, 1998; Roman & Blum, 1995). These collateral costs and the success of programs that teach co-workers to refer troubled colleagues for help (e.g., Sonnenstuhl, 1996) suggest that a social-ecological approach to prevention has value. We introduce this approach to complement prevailing policies that tend to focus messages on individual employees and deterrence (drug testing).

In approaching the problem of job-related substance abuse we think it helpful to distinguish between use, abuse, and dependence. Following Normand *et al.* (1994), we define use as the limited, controlled consumption of a drug without significant and adverse consequences to the user. In contrast, abuse is defined as the level of alcohol or drug use that typically leads to adverse physical or psychological

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consequences. Regular use of prescribed medications and legal drugs (nicotine, caffeine, alcohol) can lead to dependence, which is characterized by a compulsive desire to use a drug repeatedly. Workplace policies prohibit abuse of any drug (alcohol, illicit, and prescription drugs) and any use of illegal drugs.

THE SOCIAL CONTEXT OF PREVENTION

The model we describe rests on a premise supported by both theory (Backer, 1987; Roman, 1990) and research (Roman & Blum, 1995); namely, the effectiveness of prevention programs requires supportive elements in the work environment. Generally speaking, skills learned in training programs are more likely to transfer when these programs enhance multiple social factors that support new skills (Morrisey *et al.,* 1997) and when they are relevant; i.e., meaningfully link with norms in the work environment (Broad & Newstrom, 1992). Skill support and norm linkage depend on co-workers, who can have a negative or positive influence on employees with drug or alcohol problems. Co-workers pick up the slack, actively enable (Roman, Blum, & Martin, 1992), and increase alcohol availability at work (Ames & Grube, 1999), but they also may facilitate the employee to get help (George & Tucker, 1996). Thus, intragroup relations, in addition to the individual employee, should be the focus of prevention efforts. Moreover, workplace social factors may mediate the impact of policies and employee assistance programs on prevention (Trice, 1990).

Recent changes in workplace organization and policies have also influenced the work group in ways that pertain to prevention (Sauter & Hurrell, 1999). First, through downsizing or restructuring, many organizations have increased nonhierarchical management, placing more shared responsibility in the hands of workers (e.g., empowerment and total quality management). As agents of policy, supervisors have traditionally been trained to refer employees to get help for problems (Boone, 1995; Sonnenstuhl, 1990). However, interdependent work may increase the need for and impact of informal sanctions against deviant co-workers (c.f., Anderson, Chiricos, & Waldo, 1977). Co-workers may encourage a troubled employee to seek help especially when the loss or firing of their colleague results in an increased workload (Hood & Duphorne, 1995).

Second, many employers now test for alcohol and drugs (Bahls, 1998). Testing increases privacy concerns (Gillom, 1994; Hubbartt, 1998; Sujak, Villanova, & Daly, 1995), but most employees tend to favor testing, especially in jobs involving safety, contact with the public (Murphy, Thornton, & Prue, 1991; Tepper, 1994), or when previously exposed to co-worker use (Bennett & Lehman, 1997a). These findings suggest policies acquire meaning in the context of work behavior. Increased surveillance in teams may also cause stress. Workers may have less time alone, face ambiguities associated with decentralization, and share increased responsibility for co-worker behavior (Bennett & Lehman, 1999a).

We suggest that attention to these contextual factors, such as support for training transfer, co-worker reactions to substance use, teamwork, and policy attitudes will enhance relevance and effectiveness of most workplace policies currently in place. It is difficult to define a ''standard of practice'' for these programs that applies across organizations, as policy varies according to industry, occupation, and size of the business establishment (see SAMHSA, 1996, 1999). However, for many organizations, substance abuse education ignores contextual elements, and instead focuses on individuals as separately vulnerable to problems and policy dissemination (Cook, Back, & Trudeau, 1996; Irwin, 1991). Core elements typically include a written policy, supervisor training, employee education/awareness, availability of an employee assistance program (EAP), and identification of illegal drug users (e.g., Working Partners, 1998; Wright & Wright, 1993). Common dissemination practices include flyers, pamphlets, videos, and new employee orientations.

Although these core elements and their dissemination are critical, information provided is often rudimentary, especially for workers needing more advice. In fact, findings suggest that beyond didactic training, increased familiarity with EAP programs significantly enhances willingness to use them as a referral source (Boone, 1995; Hopkins, 1997). The need for increased EAP familiarity is highlighted by the National Household Survey on Drug Abuse (SAMHSA, 1999). Among full-time employees reporting current illicit drug use (7.6%), only 35% reported access to EAP or drug counseling. These drug users were more familiar with other aspects of policy, such as drug testing (47%), a written policy (57%), and information regarding alcohol or drug use (62%). Apparently, common workplace practices emphasize information dissemination more than counseling or prevention.

Our training was based on the premise that employees would be more apt to apply prevention

materials made relevant to their concerns about stress and communication at work. We derived ideas for training components through a review of the literature related to employee substance use and co-worker exposure to such use. Our prevention model is an experiment. We sorted through the complexities involved in understanding employee alcohol and drug abuse to identify contexts where the model may work. As alluded to in the title of this paper, we describe a "development" or work in progress. Sections below describe the research and theoretical underpinnings of this development.

EMPIRICAL BASIS OF THE PREVENTION MODEL

Various findings suggest that workplace psychosocial factors influence alcohol and drug use by employees, the negative effect of such use on co-workers, and employee response to policies. Psychosocial factors include (1) workplace environment, (2) group processes, (3) perceptions and tolerance of co-workers who use alcohol or drugs, and (4) attitudes toward policy. As shown at the top of Fig. 1, problematic substance use leads to the need for policy, which develops to control or regulate problems. However, organizations, groups, and individuals influence such regulation (lower portion of figure). As the figure suggests, these factors may be viewed along a continuum of macro-organization influences (work environment) to micro-psychological influences (attitudes). Studies on workplace environment examine broad, systems-level processes within occupations and work cultures that also influence groups. Studies on group processes focus on employee perceptions of the work group as well as the ways that employees condone co-worker substance use. Other research focuses on individual perceptions/attitudes (of co-workers and policy). The figure also shows risk and protective factors at each level of influence. This framework builds upon previous views of policy as shaped by social dynamics at work (Bennett & Lehman, 1997a). Processes at each level of analysis both shape and are shaped by workplace policies that attempt to regulate substance use. The next section reviews how research on psychosocial factors informed the design of the training.

Workplace Environment: Risk and Protective Factors

Work environment research can be framed in terms of two risk factors and two protective factors (see "Organizational influence" panel in Fig. 1). Risks include occupational subcultures that develop around safety and a work climate that may support the use of alcohol (drinking climate). Protective factors are social integration and organizational wellness.

Risk Factor: Safety-Related Occupations

Employee abuse of alcohol or drugs either during or before work is reportedly high within occupations involving safety risk (machinery use, toxic chemicals), mobility (truck driving), and shift work (Ames & Grube, 1999; Lehman *et al.,* 1995; Lund *et al.,* 1991; Macdonald, Wells, & Wild, 1999; Trinkoff & Storr, 1998). Safety characteristics also combine with work culture in impacting susceptibility to problem drinking. Evidence points to the formation of occupational subcultures (Fillmore, 1990; Sonnenstuhl, 1996) where employees either bend rules or view certain behaviors as normal rather than deviant. Examples include drinking on the job for assembly workers (Ames & Janes, 1990) and illicit prescription drug use among pharmacists (Dabney & Hollinger, 1999). Much of the research reviewed below pertaining to subcultures comes from survey studies of municipal employees (Bennett & Lehman, 1996a) and ethnographic analyses of assembly line workers (Ames & Janes, 1990). Other studies suggest subcultures exist in various safety occupations: train operators (Manello, 1979), nurses (Hood & Duphorne, 1995), flight attendants (Bamberger & Sonnenstuhl, 1995), tunnel workers (Sonnenstuhl, 1996), police officers (Carter, 1990), and restaurant workers (Kjaerheim *et al.* 1995).

Among occupational dimensions, safety risk often predicts substance use at work. This occurs when risk is measured as vehicle use, working with machinery or toxic chemicals (Lehman *et al.,* 1995), or as physically demanding work or hazardous exposure (Mensch & Kandel, 1988). Lehman *et al.* (1995) found that workers in risky jobs were twice as likely as those not in risky jobs to have used illicit drugs in the last year or to have used substances at work. Various explanations for the relationship between safety occupation and drug use exist. These include long-standing traditions within certain jobs that tie occupational identity to heavy drinking, self-selection into
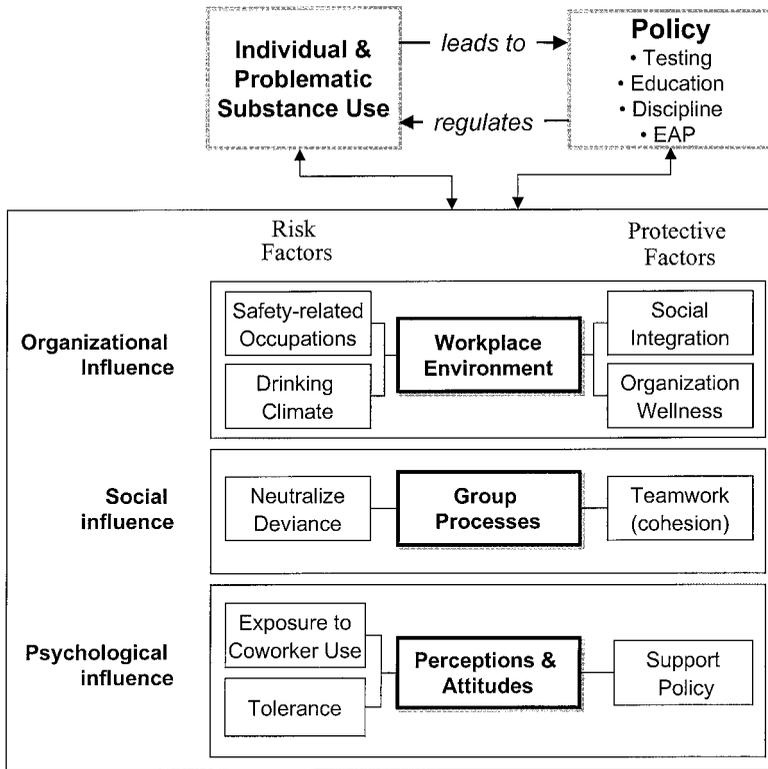
Fig. 1. A multi-level model and empirical framework for understanding workplace influences on employee substance use and co-worker exposure to such use.

jobs that lack surveillance (low supervision, independent work crews) thereby permitting users to hide problems, and the probability that behavioral effects of drug use are more observable on safety-related tasks requiring concentration and coordination (see Brief & Folger, 1992; Mangione *et al.,* 1999; Normand *et al.,* 1994).

Co-workers may be more vulnerable to the negative consequences of employee abuse when their group contains a high proportion of safety-risk jobs. Bennett and Lehman (1999a) derived aggregate measures of work groups on occupational dimensions (groups with jobs involving risk and mobility) and social dimensions (cohesiveness and drinking climate). Risk was the best predictor of co-worker vulnerability in the two samples studied, although drinking climate also moderated vulnerability (see below). The more that groups contained a high degree of safety-sensitive jobs, the more likely employees were to report problems of co-worker substance use. In general, drinking and drug use are more likely in safety-sensitive jobs and in groups where such use may have the most adverse impact.

Risk Factor: Drinking Climate

Job characteristics such as low job latitude, low job autonomy, and repetitive or stressful work also correlate with problem drinking (Greenburg & Gruneberg, 1995; Seeman, Seeman, & Budros, 1988). Interestingly, social supports may form to deal with these job qualities such that employees drink together to cope, show solidarity with co-workers, or engage in joint leisure (Ames & Janes, 1990; Cosper, 1979). These ''drinking climates'' entail social drinking and attitudinal support for drinking (Beattie, Longabaugh, & Fava, 1992; Bennett & Lehman, 1998; Seeman & Anderson, 1983).

Studies demonstrate that drinking climate correlates with exposure to co-worker drinking and related problems for other employees. As noted above, group-level measures of drinking climate predicted individual susceptibility to consequences from exposure (Bennett & Lehman, 1999a). This effect of drinking climate was independent of group levels of safety-risk. Employees are also more likely

to witness violence on the job when they work in drinking climates (Bennett & Lehman, 1996b).

Protective Factor: Social Integration

Social integration refers to the presence of workplace social support, job involvement, and the absence of alienation or estrangement at work (c.f., ''alienation paradigm,'' Trice & Sonnenstuhl, 1990). In studies of drinking and drug use, integration has been referred to as subjective well-being (Beattie *et al.,* 1993), occupational community (Seeman & Anderson, 1983), and integrative versus alienating tendencies at work (Bennett & Lehman, 1996b). Integration appears to help employees cope with job-related problems in ways other than through alcohol. For example, the perceived presence of supportive co-workers or supervisors is negatively correlated with escapist or job-stress reasons for drinking (Fennell, Rodin, & Kantor, 1981) and positively related to abstinence for employees admitted to outpatient treatment (Beattie, Longabugh, & Fava, 1992). Alternatively, problem drinking may be a way of coping in jobs perceived as alienating (Greenburg & Gruneberg, 1995; Parker & Farmer, 1990).

Measures of integrative factors also correlate with less illicit drug use, less use at work, and less co-worker exposure and collateral problems. In a study of employees who witnessed violence at work (Bennett & Lehman, 1996b), drinking climate was not related to violence exposure when employees reported more integrative than alienating tendencies. In contrast, when integration was low and alienation high (e.g., more conflict), increases in drinking climate significantly associated with increases in violence exposure.

Protective Factor: Organizational Wellness

Several authors have advanced the concept of organizational health or wellness (e.g., Guthrie & Olian, 1990; Quick, 1999; Rosen, 1991). Broadly defined, organizational wellness has two components: healthcare benefits and a work culture that supports healthy lifestyles. Healthcare availability and policies that enable appropriate referral and medical/behavioral care (including treatment for substance abuse) characterize healthy workplaces. Healthy work cultures emphasize employee involvement, family friendly policies that promote work-life balance (e.g.,

child care), peer support, and positive flow of communication (c.f., ''social health,'' Gottlieb & McLeroy, 1994). Bennett and Lehman (1997b) developed a self-report measure of organizational wellness, assessing three work climate dimensions (healthy outlook of co-workers, co-worker openness, and organizational supports for employee health). The overall score correlated negatively with self-reports of alcohol use, problem drinking, illicit drug use, enabling of co-workers, and positively with favorable attitudes toward policy.

Work-life balance is a key facet of organizational wellness. Increased work hours and employee relocations have increased work-family conflict, causing stress in families. Family-friendly policies that reduce work-family conflict can improve performance and health (DesBeins, 1999; Solomon, 1999). These policies have relevance for substance abuse; studies show increased levels of heavy drinking among employees whose work life interfered with home/family life (Frone, Barnes, & Farrell, 1994; Frone, Russell, & Cooper, 1993).

Application

The above studies indicate that work environments contain both risk and protective factors that pertain to workplace substance use. The prevention training developed in this study encouraged workers to examine and openly discuss their assessment of both these risk and protective factors at work. These discussions included appraisal of work stressors, employee benefits, and methods for coping.

Group Processes: Team Work, Enabling, and Neutralization of Deviance

Studies reviewed here focus on worker perceptions of group cohesiveness as well as the ways employees condone or neutralize coworker substance use (see ''Social influence'' panel in Fig. 1). Although teamwork overlaps with social integration, certain aspects of teamwork, particularly group cohesiveness, refer more to group rather than organizational processes. ''Neutralize deviance'' refers to processes where group members justify, rationalize, support or tolerate deviant behaviors of co-workers (Robinson & Kraatz, 1998).

Risk Factor: Employee Enabling and Neutralization of Deviance

As part of a culture that supports drinking, co-workers and supervisors can cover for or enable problem users. Supervisors may do so actively by offering work assistance to prevent troubled employees from losing their jobs (Roman, Blum, & Martin, 1992), or passively, through unwillingness to confront work groups where disciplinary action for alcohol control is unpopular (Ames, Delaney, & Janes, 1992). An early study of male members of Alcoholics Anonymous revealed over one-third reported getting help from work associates, immediate bosses as well as subordinates, in concealing their problem drinking from others (Trice, 1962). Co-workers may also hesitate to report users who are friends with supervisors (Hood & Duphorne, 1995).

In two studies, Bennett and Lehman (1996b, 1997b) distinguished factors in worker's informal support of co-worker substance use. These included enabling (ignoring the situation), and the likelihood of enabling by co-workers ("picking up the slack") and supervisors (supervisors would not do anything to stop drinking on the job). Of the three measures, co-worker enabling had the strongest (inverse) association with organizational wellness and the strongest (positive) association with exposure to violence at work.

Protective Factor: Teamwork

Teamwork or group cohesiveness may be especially important for prevention. A growing body of evidence suggests that teamwork or organizational participation is associated with a decreased likelihood of alcohol problems or drinking climates (Beattie, Longabaugh, & Fava, 1992; Bennett & Lehman, 1998; Delaney & Ames, 1995; Fillmore, 1990; Greenburg & Gruneberg, 1995). This benefit of teamwork may be due to social norms that promote and support task-related and cohesive behavior among co-workers—norms that run counter to the support of deviant behavior. In cohesive groups norms dictate fair distribution of work, cooperation, interdependence, and addressing rather than avoiding problems. There is generally more conformity and rule compliance and less support for deviant behavior.

Although no research directly examines the mechanisms through which cohesiveness mitigates employee substance abuse, the above findings are consistent with three strands of social psychological research. First, groups often show strong pressures against deviance and toward uniformity, especially when individual performance is identifiable and interdependent (Moscovici, 1976). Second, cohesive groups tend to produce greater pressures to conform than do noncohesive groups (Forsyth, 1983; Shachter, 1951). Third, studies show that positive performance enhances group cohesion (Mullen & Copper, 1994). These factors likely mitigate substance abuse in team environments because abuse is generally a minority behavior in any given work group, relates negatively with performance, and is more likely to be observable within interdependent or face-to-face tasks. Thus, unless a group's identity is bound up with shared drug use, it is likely that such use is in the minority and would not survive pressures toward conformity.

Group cohesiveness also has buffering effects for employees exposed to co-worker abuses. Bennett and Lehman (1998) categorized employees according to their perception of drinking climate (low, high) and group cohesion (low, high) and assessed several problem indicators (e.g., job stress). In two samples studied, employees were most likely to experience problems in low cohesive groups with high drinking climates. When drinking climates were strong, employees reporting high cohesive groups had less stress and psychological withdrawal than employees in low cohesive groups.

Using similar methodology, Bennett and Lehman (1996b) assessed self-reports of antagonism at work (e.g., arguing, snitching on co-workers, insubordination). In three samples, employees showed highest levels of antagonism in low cohesive groups with high drinking climates and lowest levels in high cohesive groups with low drinking climates. Moreover, antagonism was associated with both exposure to co-worker use and related consequences (more so than one's own drinking or drug use).

Application

As more employees work in teams, they are subject to the behavioral risks of problem workers (Yandrick, 1996). The above studies suggest that group cohesiveness may be a significant buffer against such risks. The training developed for this study focused on team-building and encouraged workers to view helping and peer referral as part of teamwork and to view enabling and tolerance as detrimental. We also utilized a board game ("Risks and

Strengths'') to reinforce teamwork as a critical protective factor.

Perceptions and Tolerant Attitudes Toward Co-worker Substance Use

Group factors influence exposure in the work setting, but individual psychology may operate independently from and in interaction with the group (see ''Psychological influence'' panel in Fig. 1). The next set of findings pertains to how individuals are exposed to use and hold tolerant attitudes toward co-worker use.

Risk Factor: Exposure to Coworker Use

Exposure to co-worker use correlates with job stress and withdrawal (Bennett & Lehman, 1998), with less favorable ratings of job climate (such as faith in management) (Lehman, Farabee, & Bennett, 1998), and with less teamwork (Bennett & Lehman, in press). Vulnerability to co-worker substance abuse depends on factors in the abuser, the perceiver, and the group. Although some may be successful at hiding a drinking or drug problem, employees familiar with substance use are more likely to detect it in others. Awareness of co-worker drinking is correlated with one's own drinking frequency (Ames & Grube, 1999) and problem drinking (Bennett & Lehman, 1998). Group factors, such as drinking climate, are also associated with individual exposure (Bennett & Lehman, 1999a). Social approval and availability of alcohol through co-worker sharing also relate to co-worker use (Ames & Grube, 1999).

Risk Factor: Tolerance of Co-workers

Just as norms reflect group variation in tolerance for deviance, individuals vary in tolerant attitudes for co-worker substance abuse. To elicit these attitudes, Lehman, Rosenbaum, and Holcom (1994) created vignettes describing employee substance use. The vignettes varied by drug type (tobacco, alcohol, marijuana), location (at work, away from work), and job type (low versus high risk). For each vignette, employees responded by indicating if they would be willing to work with, cover for, and report the co-worker. Employee tolerance was lowest when vignettes depicted co-workers who used marijuana, at work, in a high-risk job. Across vignettes, tolerance increased as a function of history of use. Illicit drug users reported more tolerance than problem/heavy drinkers (who did not use illicit drugs) who, in turn, reported more tolerance than non-users. Tolerant employees are also less willing to utilize EAP services (Reynolds, 1999). Among problem drinkers, those who are tolerant also seem the most reluctant to get help.

Tolerant attitudes also reflect risk factors for substance abuse. Lehman (1995) classified employees into one of three groups based on their overall level of tolerance (low, medium, and high) and compared these groups on a profile of variables (e.g., personal background and job factors). The profile of variables that best described highly tolerant employees showed them to be younger males with higher levels of deviance (arrest record, peers with deviance, risk-taking behaviors) who also worked in safety-sensitive jobs. The demographic profile of highly tolerant attitudes matches very closely the one that describes marijuana users (Lehman, 1995). Most importantly, Lehman, Olson, and Rosenbaum (1996) simultaneously entered tolerance along with six personal background factors (e.g., religious attendance, arrest history, depression) and job risk to estimate substance use. The tolerance measure was the best predictor of recent illicit drug use and, following arrest history, the best predictor for use at work.

Application

Both perceptions and tolerant attitudes provide windows into employee cognition and motivation. The training used participatory exercises where employees shared perceptions and attitudes about tolerance in small-group discussions. We reasoned that through communication, employees might dispel stereotypes and cognitive barriers (stigma) that prevent them from using the EAP or referring a troubled colleague.

Protective Factor: Support of Policy

When employees present problems that stem from substance abuse, co-worker reactions depend on multi-level forces described above: organizational (occupational, risk factors), group level (cohesiveness, drinking climate) and personal. Workplace policies cut across these levels, both in how they

are communicated and how they are understood. Employees can sometimes disregard policies without risk of incurring penalties when norms and values are unclear, ambiguous, or open to multiple inter-pretations (Robinson & Kraatz, 1998). While policy communication should enhance clarity, many em-ployees are not aware of or hold diverging views of policies. As our model suggests, the effectiveness of policy to regulate substance abuse (top of Fig. 1) may depend on these views (bottom panel of Fig. 1).

Across three samples, Bennett and Lehman (1996a) distinguished attitudes toward policy on the basis of how crystallized these attitudes were. For example, employees with uncrystallized attitudes either lack sufficient information about policy to form an opinion or they know policy but hold ambivalent or mixed feelings toward it. Bennett and Lehman's classification scheme distinguished different groups: (a) crystallized-dissatisfied—employees who appeared clearly dissatisfied with policy, (b) crystallized-satisfied—employees with clear attitudes who were satisfied with policy, (c) anti-policy—those against further policy efforts, (d) pro-policy—those in favor of increased policy ef-forts, and (e) uncrystallized—those who did not know their attitudes. In each sample, about 20% were uncrystallized and 40%–50% held mixed atti-tudes of pro- or anti-policy. Different profiles char-acterized each group. For example, dissatisfied workers reported less drinking, relatively high co-worker drug use, and low willingness to self-refer for problems, whereas anti-policy workers reported high personal and co-worker drug use, and low job identity (low commitment and high withdrawal). Importantly, job identity predicted crystallization; employees who identify with their jobs also know their opinions about policy.

Drug testing has stimulated the majority of research on policy attitudes (Gillom, 1994; Murphy, Thornton, & Prue, 1991) even though policy has many components—education, EAP, and discipline. Policies have a "dual" frame, sending educative/rehabilitative (getting help) and disciplinary (getting caught) messages. Testing serves both messages by encouraging workers to get help before their abuse results in getting caught, but also helps identify and discipline substance abusers. Bennett and Lehman (1997a) found that workers exposed to others' drink-ing were more willing to endorse testing and disci-pline. In contrast, substance users show less support for testing (especially random) and more support

for education. Interestingly, employees with a recent history of drunkenness or problem drinking disfa-vored both education and discipline. As in the crystallization study, employees focus on different policy messages as a function of their own circum-stances. Bennett and Lehman (1997a) use these findings to suggest that policy is a social construc-tion: "policy depends on employee values and social circumstances, and upon how it is enculturated through informal and group-oriented channels" (p. 60).

Application

Workplace policies and employee attitudes to-ward them occur within social contexts. As the above studies show, attitudes are associated with personal history and co-worker exposure. Traditionally, sub-stance use training offers didactic review of employee rights and responsibilities (Wright & Wright, 1993). The team-oriented training reviewed policy following a lengthy discussion of its social relevance and—instead of emphasizing knowledge of actual policy rules—asked employees to weigh the relative costs and benefits of getting help versus getting caught. We reasoned that this approach would enhance worker ownership of policy, more than would a didactic re-view of policy.

CONCEPTUAL SYNTHESIS AND DEVELOPMENT OF PREVENTION MODEL

We developed a conceptual model and training program using the factors reviewed above (Fig. 2). The short-term goals of training were to enhance group responsiveness to problems, improve attitudes toward policy, and increase help-seeking/peer-refer-ral (to EAP or other resources) as mediators of long-term reductions in substance abuse. The above research (see "Application" sections) and several extant models informed training design. Models included (a) those highlighting work culture as moderating policy effectiveness and employee alco-hol abuse (Ames & Janes, 1990; Trice & Sonnens-tuhl, 1990; Walsh, Rudd, & Mangione, 1993)—we extend these ideas to cover drug abuse; (b) the social psychology of group dynamics (Vallacher & Nowak 1994), workplace deviance, and response to deviance (Robinson & Bennett, 1997); and (c) social constructionist thought, which focuses prevention

on shared responsibility rather than in individuals (McNamee & Gergen, 1999). By social construction, we mean that individuals construct the meaning of situations through social relations, which negotiate a common language, metaphors, rationales for action or inaction, and standards of accountability (Cooperrider & Srivastva, 1981; Gergen, 1997). We also saw the work climate as helping employees transfer tools from training into the work environment ("transfer climate," Bennett, Lehman, & Forst, 1999).

Figure 2 outlines the steps we took in deriving the goals, purpose, and objectives of training. Starting with our research framework (step 1 in Fig. 2), we viewed the group as nexus for organizational and individual processes. We reasoned that group dynamics can occur in a negative cycle (Step 2), where employees allow problems to continue. We focused on enabling/neutralization in this negative cycle (Step 3). The goals and five training objectives were designed to promote a positive cycle of supportive

attitudes and the skills for addressing problems (Step 4).

The Negative Cycle

The negative cycle is sustained by the presence of more risk than protective factors, such as those reviewed above (e.g., drinking climate, alienation, safety risks). A representative sequence of behaviors describes this cycle.

1. *Problem presentation:* an employee presents with a deviant or problematic behavior (e.g., poor attendance), which is a direct or indirect result of alcohol or drug abuse.
2. *Problem enabling or neutralization:* co-workers and/or supervisors, through a set of self-reinforcing actions (tolerance, poor communication, withdrawal, inadequate coping), enable or neutralize the behavior.
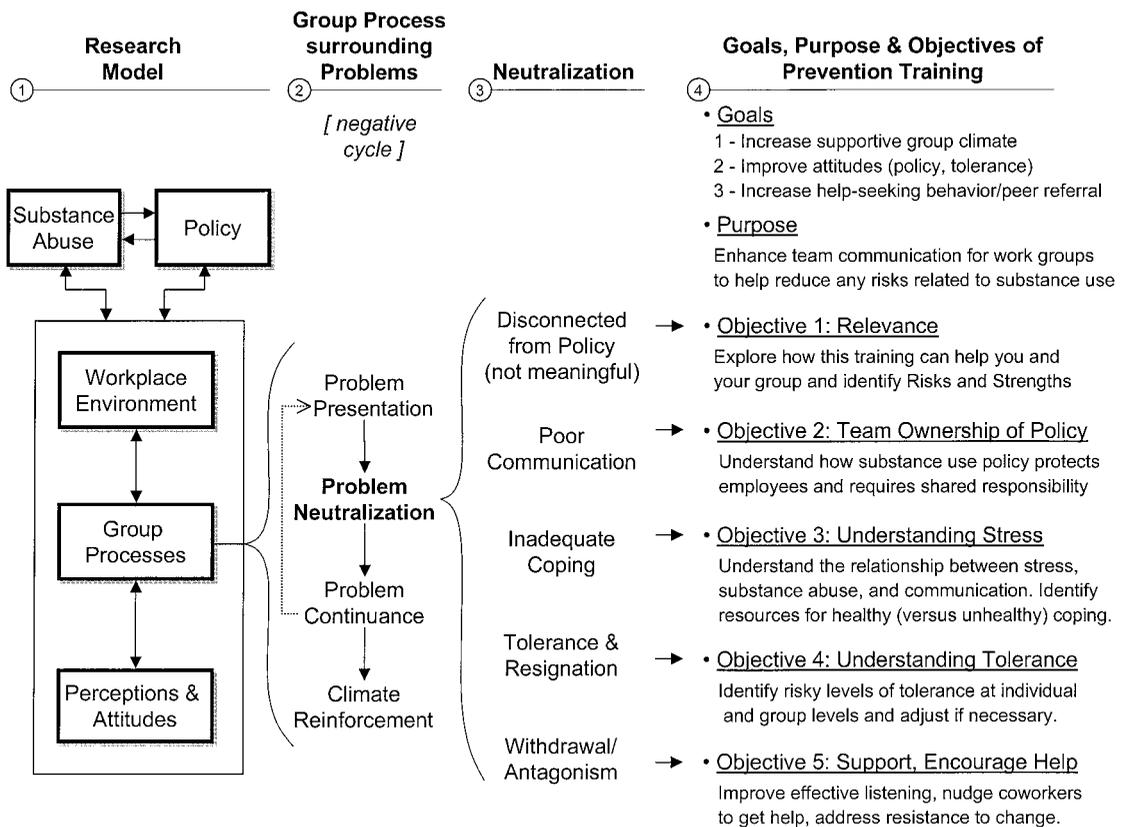

Fig. 2. The development of a team-oriented training for preventing workplace substance use: From background research and group processes to training objectives.

3. *Problem continuance:* the problem remains unaddressed, reappears, or is sustained over time.
4. *Climate reinforcement:* as a result, negative aspects of the environment endure.

We designed training objectives to address these four factors, focusing on attitudes and behaviors that, aggregated across employees in a group, constitute work climate.

Enabling and Neutralization

Attitudes and behaviors that support enabling include (1) disconnection from policy—employees do not see policy as meaningful or their group's informal norms run counter to policy as formally written; (2) poor communication—employees fail to speak up, avoid conflict, and otherwise stigmatize, minimize, or deny the problem; (3) inadequate coping—co-workers experience job strain and inability to cope with stress owing to poor communication or employee withdrawal/antagonism; (4) tolerance and resignation—tolerance of the problem (apathy) results from and contributes to other factors in this cycle; and (5) withdrawal and antagonism—employees in the work group act withdrawn or antagonistic. Because of withdrawal, resignation, and the belief that "nothing will change," workers are unwilling to address issues such as encouraging a troubled employee or seeking assistance from the EAP.

Training Goals and Objectives

To counter these problems, we developed training objectives (and modules) to foster communication and a supportive work climate. As we told employees, the purpose of training was to enhance team communication for work groups to help reduce any risks related to substance abuse (see Fig. 2, top right). We focused training on these five specific areas for several reasons. First, concise objectives that refer to behavioral outcomes enhance the ability to monitor knowledge and skill acquisition (Mager, 1997). Second, we hope to link objectives with outcome measures, which can best be done by narrowing the scope of concepts and specifying a realistic endpoint that can result from interventions (Earp & Ennett, 1991). Finally, these attitudes and behaviors are problems for any group, regardless of substance abuse con-

cerns. This should enhance training relevance for workers with any problem as well as for their affected or concerned co-workers.

The training portrayed policy as a useful guide rather than a tool for behavior control. To counterpoint enabling and neutralization (a risk cycle), objectives highlighted a positive cycle of relational responsibility that addressed problems (see Step 4 in Fig. 2). For example, for policy disconnection, we presented data estimating the level of substance abuse within the employee's own organization, and asked employees to discuss risks and strengths they saw at work. Estimates came from anonymous surveys previously conducted at the work site, and from EAP utilization records. Figure 2 lists training objectives and training components associated with each objective are described later (see "Component 1").

DESCRIPTION AND PRELIMINARY EVALUATION OF TEAM-ORIENTED TRAINING PROGRAM

The team-oriented awareness training is an 8-hour program administered across two (4-hour) sessions, 2 weeks apart. Six to 8 weeks prior to training delivery, we conduct interviews with EAP representatives and key personnel in human resources (e.g., employee relations, training directors), obtain copies of all relevant documents (policies, previous training material, EAP promotional materials), and engage a sample of employees in different focus groups. Interviews and focus groups help to identify issues that require addressing in training and help customize training in several ways; for example, we create a "true-false" policy quiz and design other questions to be used in a board game (see below). The training is suitable for 9–15 employees to allow for group discussion. Although shorter versions have been used, this section summarizes the full training and focus groups.

Training Description

Focus Groups

Previous studies suggest that focus groups may allay any resistance employees have to the idea of substance abuse prevention (Towers, Kishchuk, Sylvestre, & Bourgault, 1993). These groups, even though they occur prior to training, are part of the intervention. Managers select a representative sam-

ple of employees to attend focus groups. These groups pilot training materials, attempt to enhance employee involvement, build rapport between researchers and employees, and help trainers understand the work climate.

Component 1: Relevance

Following a warm-up activity, we introduce a distinction between ''standard training'' (focused on individuals as separately vulnerable to problems) and ''team-oriented training'' (focused on workgroups and the issues they face—work climate, productivity, and job stress). Using mini-lecture, discussion, and various exercises, employees explore how the training might be helpful to them. We review and discuss principles of prevention (e.g., stress management). Small groups fill out an incomplete sentence task about community, teamwork, and perceived substance abuse at three societal levels: country, state, and local community/workplace. Using a questionnaire, employees receive feedback about cohesion in their group and exposure to problem workers.

Component 2: Team Ownership of Policy

Employees complete and receive feedback on a policy quiz. A mini-lecture describes three aspects of policy: (1) recognizing the problem, (2) getting help (e.g., EAP), and (3) getting caught (testing and discipline). In small groups, employees complete a 2×2 matrix where they list costs and benefits of ''Getting Help'' versus ''Getting Caught.'' Employees are then divided into small groups and play a boardgame (''Risks and Strengths'') where each group has to work together to choose answers to multiple-choice or true-false questions. Questions refer back to the mini-lecture, policy, and general knowledge about alcohol and drug use. Correct responses earn the team a ''Strength'' (a green poker chip) and incorrect responses earn a ''Risk'' (red chip). Participants can reduce risks by going to ''getting help'' spaces. The team with the most ''strengths'' wins and every winning team member is given a $5 gift certificate.

Component 3: Understanding Stress

Employees self-assess their coping style and are then shown a video in which workers choose to deal with stress by going out for drinks or going for exercise (Cook, Back, & Trudeau, 1996). We next discuss healthy versus unhealthy coping and describe how stress and drug use is related. Using a flip-chart activity, employees identify stressors, how stressors keep work from getting done or done well, and methods for coping.

Component 4: Understanding Tolerance

Employees complete a survey asking how much they would tolerate six different types of scenarios involving problems (e.g., a co-worker repeatedly comes late to work, a co-worker uses cocaine on weekends). They are then placed in small groups and asked to reach consensus on the same set of scenarios. The ensuing discussion is used to highlight how tolerance can occur at the group level and can be a risk factor for groups. The topic of drinking climate is discussed.

Component 5: Support and Encourage Help

A mini-lecture and activity reviews the positive and negative aspects of grapevine communication (rumors, gossip). Handouts describe effective listening tips and guidelines for approaching employees who have a problem. We present a NUDGE model (Notice-Understand-Decide-use-Guidelines-Encourage) with instruction on how to ''Roll with Resistance'' when trying to encourage a colleague to get help. Groups of three to four employees review case studies for role-play. One worker acts the part of the employee with a drug or alcohol problem, another ''nudges'' them to get help, and the third observes. This component also reviews EAP confidentiality. Policies commonly encourage self-referral to the EAP, indicating that employees cannot be disciplined for voluntarily using the EAP and that, by taking steps to resolve problems, they reduce chances of future disciplinary action. By thorough review of this policy, the training sought to alleviate fears that jobs may be in jeopardy if employees seek treatment.

Homework and Transfer Enhancement

At the end of Session 1, employees are given an optional "Taking it Back to Work" assignment. They

choose to either bring back a magazine or newspaper article related to any topic discussed in training (substance abuse, stress, community, policies) or to discuss with others any issue reviewed in training. These assignments were reviewed with supervisors of all work groups prior to training. All assignments were used as a springboard for discussion in Session 2.

DISCUSSION

The current paper outlines the steps we took in applying research and theory to the development of a team-oriented substance abuse training program for use in the workplace. This paper does not provide any systematic test of the diverse elements in the conceptual model (Fig. 2, e.g., the negative cycle of enabling). However, 300 employees in two work sites have now participated in the 8-hour program. Preliminary results using a control group, random assignment, and pretest-posttest design suggest that the training may improve group communication (social integration), increase employee trust in EAP confidentiality (attitudes toward policy), and enhance knowledge of policy and EAP services (Bennett & Lehman, 2000). We recommend adapting the training in different work populations, and our training materials are available to employers and interested researchers.

There has been a growing interest in the worksite as an arena for substance use prevention, as well as increased need for collaboration between prevention researchers and managed care organizations that could provide prevention services (Bennett & Beaudin, 2000). Most recently, the Center for Substance Abuse Prevention (CSAP) is coordinating a cross-site study involving nine independent researchers who work collaboratively with managed care organizations to assess different types of prevention strategies (e.g., health promotion, peer referral) (CSAP, 1999). Some of these prevention strategies highlight workplace social factors. Dusenbury (1999) identified key elements of effective worksite programs, one of which was the need for a strong theoretical orientation. "The best theoretical model for conceptualizing workplace prevention remains to be determined, though research is emerging that suggests the importance of social and psychological theories" (Dusenbury, 1999, p. 149). The current model, with its emphasis on social/psychological factors, may be helpful for prevention researchers.

If effective, our model and training may impact other health issues, especially given the medical/health problems that accrue when substance abuse is not addressed. Sauter and Hurrell (1999) claim a growing need for psychologists in two areas of primary prevention—health protection (reducing exposure to workplace risks) and health promotion (equipping workers with resources to improve their own health and thereby resist hazards in the work environment). These authors suggest that prevention in health psychology should focus more on environmental factors rather than on individual-level variables. The current model and preliminary findings suggests that a focus on social environment may have a positive impact in both protection and promotion.

Potential Limitations of the Current Model

Although we hope the current model will be useful to prevention scientists and that the team-oriented program will be effective in preventing substance abuse, we recognize certain limiting conditions. These include organizational structure, changes in the nature of work, labor-management relations, the new employee contract, and employee socialization at work, all of which may influence employee motivations to seek or encourage help for psychological problems. This section examines these conditions. In so doing, we emphasize the importance of assessing socio-organizational influences and viewing the current model (Fig. 1) as a framework for determining limiting conditions; i.e., when the training will or will not work.

The current approach assumes that training can enhance employee motivation to help co-workers. The motives of co-workers for intervening may range from protecting themselves (if the using employee is in a high-risk position) to helping independent of any potential collateral harm. Conversely, it may be argued that motivation can be undermined by an increasingly mobile workforce, the changing nature of work, and decreased loyalty among employees to their organizations. Although these conditions may limit training impact, it remains an empirical question whether motivation to help weakens amidst workforce disloyalty. In fact, our conceptual model incorporates these as impacting risk factors of alienation at the organizational level (refer to "Organizational influences," Fig. 1).

We raise these concerns because the work environment and the organization of work are rapidly changing, such that employees may have less commit-

ment to work (c.f. "violating the psychological contract," Robinson & Rousseau, 1994). In a highly mobile job market that favors short-term projects and temporary employees, substance abusers may move from job to job without ever being detected. In fact, illicit drug users are more likely to report working for three or more employers in a given year than are non-users (SAMHSA, 1999). Those exposed may see co-worker abuse as a transient problem and think that they have no role in helping. Alternatively, even short-term workers are still likely to have concerns about their own and others' safety and well-being, and may be motivated to intervene (nudge).

Motivation may also be shaped by the "psychological contract" or an individual's belief regarding promises of a reciprocal exchange agreement between that person and another party (Rousseau, 1989). Traditionally, this contract was formed between individuals and organizations in return for career and job security. In the 1990's, new work practices emerged that focus less on security and more on fairness in the short-term distribution of rewards (Rousseau, 1997). These practices emphasize interdependence even in the absence of work teams, and include network-based firms, gainsharing that ties individual rewards to peer performance, job rotation, and lateral career moves (Howard, 1995; Rousseau, 1997).

The new psychological contract and new work practices have implications for the team-oriented training. Use of the term "team-oriented" does not mean that the training would be of use only to intact work groups. Workers might be receptive to team prevention training when it is aligned with the new psychological contract. In fact, a recent national survey of workers, the Worker Representation and Participation Survey (Freeman & Rogers, 1999), suggests that employees have a better attitude toward work, labor-management relations, and management when their workplace uses advanced human resource practices that emphasize employee voice and participation. Such practices include open-door policies for group problems, regular "town" meetings, and employee-involvement programs.

It is thus possible that team training can only be brought to scale within settings that emphasize interdependence or advanced human resource practices. Evaluation of the current model might include these organizational-level factors as risks or strengths that have the potential of facilitating or breaking the cycle of enabling. Again, we only wish to suggest that prevention researchers remain sensitive to broader organizational forces. We advocate focus groups (see "Focus Groups," p. 166) and behavioral risk audits (Yandrick, 1996), to help researchers understand the organizational context of any prevention strategy.

A final issue concerns how employees are socialized into new work settings. The team training may be most effective as part of orientation to the organization, such as when policies and benefits (insurance, EAP) are described. For example, workplaces that recruit from college campuses may be concerned about high levels of binge drinking among college students (Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994). More importantly, risky drinking practices are shaped by social norms within college campuses (Perkins & Wechsler, 1996). Whether a young employee imports such drinking practices into their new situation may depend on how they perceive drinking norms among colleagues. An orientation that addresses such norms up front should help to deter abuse at work and convince those at risk to get help.

In conclusion, we encourage researchers to view the workplace as an important arena for substance abuse prevention. We hope our model and training, with the emphasis on organizational, social, and psychological influences, will facilitate such future developments and help scientists see the workplace as a valuable context for prevention.

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REFERENCES

Ames, G. M., Delaney, W., & Janes, C. (1992). Obstacles to effective alcohol policy in the workplace: A case study. *British Journal of the Addictions, 87,* 1055–1069.

Ames, G. M., & Grube, J. (1999). Alcohol availability and workplace drinking: Mixed method analyses. *Journal of Studies of Alcohol, 60,* 383–393.

Ames, G. M., & Janes, C. (1990). Drinking, social networks, and the workplace: Results of an environmentally focused study. In P. M. Roman (Ed.), *Alcohol problem intervention in the*

workplace: Employee assistance programs and strategic alternatives (pp. 95–111). New York: Quorum.

Ames, G. M., & Janes, C. (1992). A cultural approach to conceptualizing alcohol and the workplace. *Alcohol Health & Research World, 16,* 112–119.

Anderson, L. S., Chiricos, T. G., & Waldo, G. P. (1977). Formal and informal sanctions: A comparison of deterrent effects. *Social Problems, 25,* 103–114.

Backer, T. E. (1987). *Strategic planning for workplace drug abuse programs.* (DHHS Publication No. (ADM) 87-15380). Rockville, MD: U.S. Dept. of Health and Human Services.

Bahls, J. E. (1998). Drugs in the workplace. *HR Magazine, 43,* 80–87.

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology, 41,* 63–105.

Bamberger, P., & Sonnenstuhl, W. J. (1995). Peer referral networks and utilization of a union-based EAP. *Journal of Drug Issues, 25,* 291–312.

Beattie, M. C., Longabaugh, R., Elliott, G., Stout, R. L., Fava, J. & Noel, N. E. (1993). Effect of the social environment on alcohol involvement and subjective well-being prior to alcoholism treatment. *Journal of Studies on Alcohol, 54,* 283–296.

Beattie, M. C., Longabaugh, R., & Fava, J. (1992). Assessment of alcohol-related workplace activities: Development and testing of ''Your Workplace.'' *Journal of Studies on Alcohol, 53,* 469–475.

Bennett, J. B., & Beaudin, C. (in press). Modeling research partnerships in prevention: A framework for collaboration in workplace substance abuse prevention. *Journal of Healthcare Quality.*

Bennett, J. B., & Lehman, W. E. K. (1996a). Employee attitude crystallization and substance use policy: Test of a classification scheme. *Journal of Drug Issues, 26,* 831–864.

Bennett, J. B., & Lehman, W. E. K. (1996b). Alcohol, antagonism, and witnessing violence in the workplace: Drinking climates and social alienation-integration. In G. R. VandenBos & E. Q. Bulatao (Eds.), *Violence on the job: Identifying risks and developing solutions* (pp. 105–152). Washington, DC: American Psychological Association.

Bennett, J. B., & Lehman, W. E. K. (1997a). From dual policy to dual attitudes: The social construction of substance use policy. *Review of Public Personnel Administration, 17*(1), 58–83.

Bennett, J. B., & Lehman, W. E. K. (1997b). Employee views of organizational wellness and the EAP: Influence on substance use, drinking climates, and policy attitudes. *Employee Assistance Quarterly, 13*(1), 55–72.

Bennett, J. B., & Lehman, W. E. K. (1998). Workplace drinking climate, stress, and problem indicators: Assessing the influence of team work (group cohesion). *Journal of Studies on Alcohol, 59*(5), 608–618.

Bennett, J. B., & Lehman, W. E. K. (1999a). Employee exposure to co-worker substance use and negative consequences: The moderating effects of work group membership. *Journal of Health and Social Behavior, 40,* 307–322.

Bennett, J. B., & Lehman, W. E. K. (in press). The relationship between problem co-workers and quality work practices: A Case study of exposure to sex, drugs, violence, and stress. *Work & Stress, 14.*

Bennett, J. B. & Lehman, W. E. K. (2000). *An Experimental assessment of a drug-free workplace prevention training: Short-term effects of a team-oriented versus informational approach.* Unpublished manuscript.

Bennett, J. B., Lehman, W. E. K., & Forst, J. K. (1999). Change, transfer climate and customer orientation: A Contextual model and analysis of change-oriented training. *Group and Organization Management, 24* (2), 188–217.

Boone, C. (1995). The effectiveness of EAP supervisory training. *Employee Assistance Quarterly, 11,* 17–27.

Brief, A. P. & Folger, R. G. (1992). The workplace and problem drinking as seen by two novices. *Alcoholism: Clinical and Experimental Research, 16,* 190–198.

Broad, M. L., & Newstrom, J. W. (1992). *Transfer of training: Action-packed strategies to ensure high payoff from training investments.* Reading, MA: Addison-Wesley.

Carter, D. L. (1990). Drug related corruption of police officers: A contemporary typology. *Journal of Criminal Justice, 18,* 85–98.

Center for Substance Abuse Prevention (CSAP). (1999). *The Division of Workplace Programs* (*DWP*), *Workplace Managed Care Initiative.* [On-line]. Available: http://wmcare.samhsa.gov/granteelink.html.

Cook, R. F., Back, A., & Trudeau, J. (1996). Substance abuse prevention in the workplace: Recent findings and an expanded conceptual model. *Journal of Primary Prevention, 16,* 319–339.

Cooperrider, D. L., & Srivastva, S. (1981). Appreciative inquiry into organizational life. In W. A. Pasmore & R. W. Woodman (Eds.), *Research in organization change and development* (Vol. 1, pp. 129–169). Greenwich, CT: JAI.

Cosper, R. (1979). Drinking as conformity: A critique of sociological literature on occupational differences in drinking. *Journal of Studies on Alcohol, 40,* 868–891.

Dabney, D., & Hollinger, R. C. (1999). Illicit prescription drug use among pharmacists: Evidence of a paradox of familiarity. *Work and Occupations, 26,* 77–106.

Delaney, W. P. & Ames, G. (1995). Work team attitudes, drinking norms, and workplace drinking. *Journal of Drug Issues, 25,* 275–290.

DesBiens, M. (1999). (Chair). *Driving toward commitment—How global work-life strategies foster business success.* Symposium conducted at the conference ''Work, Stress, & Health '99: Organization of work in a global economy,'' Baltimore, Maryland.

Dusenbury, L. (1999). Workplace drug abuse prevention initiatives: A Review. *The Journal of Primary Prevention, 20,* 145–156.

Earp, J. A., & Ennett, S. T. (1991). Conceptual models for health education research and practice. *Health Education Research, 6,* 163–171.

Fennell, M. L., Rodin, M. B., & Kantor, G. K. (1981). Problems in the work setting, drinking, and reasons for drinking. *Social Forces, 60,* 114–132.

Fillmore, K. M. (1990). Occupational drinking subcultures: An exploratory epidemiological study. In P. M. Roman (Ed.), *Alcohol problem intervention in the workplace: Employee assistance programs and strategic alternatives.* New York: Quorum.

Forsyth, D. R. (1983). *An introduction to group dynamics.* Monterey, CA: Brooks/Cole.

Freeman, R. B. & Rogers, J. (1999). *What workers want.* New York: ILR Press/Cornell University.

Frone, M. R., Barnes, G. M., & Farrell, M. P. (1994). Relationship of work-family conflict to substance use among employed mothers: The role of negative affect. *Journal of Marriage and the Family, 56,* 1019–1030.

Frone, M. R., Russell, M., & Cooper, M. L. (1993). Relationship of work-family conflict, gender, and alcohol expectancies to alcohol use/abuse. *Journal of Organizational Behavior, 14,* 545–558.

George, A. A. & Tucker, J. A. (1996). Help-seeking for alcohol-related problems: Social contexts surrounding entry into alcoholism treatment or Alcoholics Anonymous. *Journal of Studies on Alcohol, 57,* 449–457.

Gergen, K. J. (1997). Social psychology as social construction: The emerging vision. In C. McGarty & S. A. Haslam (Eds.), *The*

message of social psychology (pp. 113–128). Cambridge: Blackwell.

Gillom, J. (1994). *Surveillance, privacy, and the law: Employee drug testing and the politics of social control.* Ann Arbor: University of Michigan Press.

Gottlieb, N. H., & McLeroy, K. R. (1994). Social health. In M. P., O'Donnell & J. S., Harris (Eds.), *Health Promotion in the Workplace* (pp. 459–493). Albany: Delmar.

Greenberg, E. S., & Grunberg, L. (1995). Work alienation and problem alcohol behavior. *Journal of Health and Social Behavior, 36,* 83–102.

Guthrie, J. P., & Olian, J. D. (1990). Using psychological constructs to improve health and safety: The HRM niche. *Research in Personnel and Human Resource Management, 8,* 141–201.

Hood, J. C. & Duphorne, P. L. (1995). To report or not to report: Nurses' attitudes toward reporting co-workers suspected of substance abuse. *Journal of Drug Issues, 25,* 313–340.

Hopkins, K. (1997). Influences on formal and informal supervisor intervention with troubled workers. *Employee Assistance Quarterly, 13,* 33–54.

Howard, A. (Ed.), (1995). *The changing nature of work.* San Francisco: Jossey-Bass.

Hubbart, W. S. (1998). *The new battle of workplace privacy: Safe practices to minimize conflict, confusion, and litigation.* New York: American Management Association.

Institute for a Drug-Free Workplace. (1997). *What american employees think about drug abuse* (A Gallup Study). Washington, DC: Institute for A Drug-Free Workplace. [On-line] Available: http://www.drugfreeworkplace.org/survey.

Irwin, D. D. (1991). *Deviance in the workplace: Case Studies of Drug Testing in Large Organizations.* San Francisco: Mellen Research University Press.

Kjaerheim, K., Mykletun, R., Aasland, O. G., & Haldorsen, T. (1995). Heavy drinking in the restaurant business: The role of social modeling and structural factors of the workplace. *Addiction, 90*(11), 1487–95.

Lehman, W. E. K. (1995). *Marijuana and performance.* Presented at the National Conference on Marijuana Use: Prevention, Treatment, and Research, Crystal City, VA.

Lehman, W. E. K., & Simpson, D. D. (1992). Employee substance use and on-the-job behaviors. *Journal of Applied Psychology, 77*(3), 309–321.

Lehman, W. E. K., Farabee, D., & Bennett, J. B. (1998). Perceptions and correlates of co-worker substance use. *Employee Assistance Quarterly, 13*(4), 1–22.

Lehman, W. E. K., Farabee, D. J., Holcom, M. L. & Simpson, D. D. (1995). Prediction of Substance Use in the Workplace: Unique Contributions of Personal Background and Work Environment Variables. *The Journal of Drug Issues, 25,* 253–274.

Lehman, W. E. K., Olson, K. E., & Rosenbaum, A. L. (1996). *Job risk and employee substance use: The influence of personal background and work environment factors.* Paper presented at the annual convention of the Society of Industrial/Organizational Psychology, San Diego, CA.

Lehman, W. E. K., Rosenbaum, A. L. & Holcom, M. L. (1994). *Employee Drug Use and Tolerance for Co-worker Use.* Paper presented at the annual convention of the Society of Industrial/Organizational Psychology, Nashville, TN.

Lund, A. K., Preusser, D. F., Blomberg, R. & Williams, A. F. (1991). Drug use by Tractor Trailer Drivers. In S. W. Gust & J. M. Walsh (Eds.), *Drugs in the workplace: Research and evaluation data* (pp. 47–69). Rockville, MD: U.S. Department of Health and Human Services.

Macdonald, S., Wells, S., & Wild, T. C. (1999). Occupational risk factors associated with alcohol and drug problems. *American Journal of Drug and Alcohol Abuse, 25,* 351–369.

Mager, R. F. (1997). *Preparing instructional objectives: A critical tool in the development of effective instruction.* Atlanta, GA: The Center for Effective Performance.

Mangione, T. W., Howland, J., Amick, B., Cote, J., Lee, M., Bell, N., & Levine, S. (1999). Employee drinking practices and work performance. *Journal of Studies on Alcohol, 60*(2), 261–270.

Mannello, T. A. (1979). *Problem drinking among railroad workers: Extent, impact, and solutions* (Monograph Series No. 4). Washington, DC: University Research Corp.

McNamee, S., & Gergen, K. J. (1999). *Relational responsibility: Resources for sustainable dialogue.* Thousand Oaks, CA: Sage.

Mensch, B. S., & Kandel, D. B. (1988). Do job conditions influence the use of drugs? *Journal of Health and Social Behavior, 29,* 169–184.

Morrissey, E., Wandersman, A., Seybolt, D., Nation, M., Crusto, C., & Davino, K. (1997). Toward a framework for bridging the gap between science and practice in prevention: A focus on evaluator and practitioner perspectives. *Evaluation and Program Planning, 3,* 367–377.

Moscovici, S. (1976). *Social influence and social change.* London: Academic.

Mullen, B. & Copper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin, 115,* 210–227.

Murphy, K. R., Thornton, G. C., & Prue, K. Influence of job characteristics on the acceptability of employee drug testing. *Journal of Applied Psychology, 76,* 447–453.

Normand, J., Lempert, R. O., & O'Brien, C. P. (1994). *Under the influence? Drugs and the American work force.* Washington, DC: National Academy Press.

Parker, D. A., & Farmer, G. C. (1990). Employed adults at risk for diminished self-control over alcohol use: The alienated, the burned out, and the unchallenged. In P. M. Roman (Ed.), *Alcohol problem intervention in the workplace: Employee assistance programs and strategic alternatives* (pp. 27–44). New York: Quorum Books.

Perkins, H. W. & Wechsler, H. (1996). Variation in perceived college drinking norms and its impact on alcohol abuse: A Nationwide study. *Journal of Drug Issues, 26*(4), 961–974.

Quick, J. C. (1999). Occupational health psychology: The convergence of health and clinical psychology with public health and preventive medicine in an organizational context. *Professional Psychology, 30,* 123–128.

Reynolds, S. (1999). *Attitudinal and normative influences as barriers to the utilization of Employee Assistance Programs.* Unpublished master's thesis, Texas Christian University, Fort Worth, Texas.

Robinson, S. L. & Bennett, R. J. (1997). Workplace deviance: Its definition, its manifestation and its causes. In R. J. Lewicki, R. J. Bies, & B. H. Sheppard (Eds.), *Research on negotiation in organizations, Vol. 6* (3–27). Greenwich, CT: JAI.

Robinson, S. L., & Kraatz, M. S. (1998). Constructing the reality of normative behavior: The use of neutralization strategies by organizational deviants. In R. W. Griffin & A. O'Leary-Kelly (Eds.), *Dysfunctional behavior in organizations: Violent and deviant behavior. Monographs in organizational behavior and industrial relations, Vol. 23* (203–220). Stamford, CT: JAI.

Robinson, S. L. & Rousseau, D. M. (1994). Violating the psychological contract: Not the exception but the norm. *Journal of Organizational Behavior, 15,* 245–259.

Roman, P. M. (1990). *Alcohol problem intervention in the workplace: Employee assistance programs and strategic alternatives.* New York: Quorum Books.

Roman, P., & Blum, T. C. (1995). Employers. In R. H. Coombs & D. M. Ziedonis (Eds.), *Handbook on drug abuse prevention: A comprehensive strategy to prevent the abuse of alcohol and other drugs* (pp. 139–158). Boston: Allyn & Bacon.

Roman, P., Blum, T. C., & Martin, J. K. (1992). "Enabling" of male problem drinkers in work groups. *British Journal of Addiction, 87,* 275–289.

Rosen, R. H. (1991). *The healthy company: Eight strategies to*

develop people, productivity, and profits. Los Angeles: Jeremy P. Tarcher, Inc.

Rousseau, D. (1997). *Organizational behavior in the new organizational era. Annual Review of Psychology, 48,* 515–546.

Sauter, S. L., & Hurrell, J. J., Jr. (1999). Occupational health psychology: Origins, content, and direction. *Professional Psychology: Research and Practice, 30,* 117–122.

Shachter, S. (1951). Deviation, rejection, and communication. *Journal of Abnormal and Social Psychology, 46,* 190–207.

Seeman, M., & Anderson, C. S. (1983). Alienation and alcohol: The role of work, mastery, and community in drinking behavior. *American Sociological Review, 48,* 60–77.

Seeman, M., Seeman, A. Z., & Budros, A. (1988). Powerlessness, work, and community: A longitudinal study of alienation and alcohol use. *Journal of Health and Social Behavior, 29,* 185–198.

Solomon, C. M. (1999). Workers want a life! Do managers care? *Workforce, 78,* 54–58.

Sonnenstuhl, W. (1990). Help-seeking and helping processes within the workplace: Assisting alcoholic and other troubled employees. In P. M. Roman (Ed.), *Alcohol problem intervention in the workplace: Employee assistance programs and strategic alternatives* (pp. 237–259). New York: Quorum Books.

Sonnenstuhl, W. J. (1996). *Working sober: The transformation of an occupational drinking culture.* Ithaca, NY: ILR Press/ Cornell University Press.

Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies (1996). *Drug use among U.S. workers: Prevalance and trends by occupation and industry categories.* DHHS Publication No. (SMA) 96-3089. Washington, DC: Superintendent of Documents, U.S. Government Printing Office.

Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies (1999). *Worker drug use and workplace policies and programs: Results from the National Household Survey on Drug Abuse* (*NHSDA*). [On-line] Available: http://www.samhsa.gov/link990908.htm.

Sujak, D. A., Villanova, P., & Daly, J. P. (1995). The effects of drug-testing program characteristics on applicants' attitudes toward potential employment. *The Journal of Psychology, 129,* 401–416.

Tepper, B. J. (1994). Investigation of general and program-specific attitudes toward corporate drug-testing policies. *Journal of Applied Psychology, 79,* 392–401.

Towers, A. M., Kishchuk, N., Sylvestre, M., Peters, C., and Bourgault, C. (1993). A qualitative investigation of organizational issues in an alcohol awareness program for blue-collar workers, *American Journal of Health Promotion, 9,* 1:56–63.

Trice, H. M. (1962). The Job Behavior of Problem Drinkers. In D. J. Pittman & C. R. Snyder (Eds.), *Society, culture, and drinking patterns.* New York: Wiley.

Trice, H. M. (1990). Implications for intervention and prevention in three streams of EAP-related research. In P. M. Roman (Ed.), *Alcohol problem intervention in the workplace: Employee assistance programs and strategic alternatives.* (pp. 339–359). Westport, CT: Quorum.

Trice, H. M. & Sonnenstuhl, W. J. (1990). On the construction of drinking norms in work organizations. *Journal of Studies on Alcohol, 51,* 201–220.

Trinkoff, A. M., & Storr, C. L. (1998). Work schedule characteristics and substance use in nurses. *American Journal of Industrial Medicine, 34,* 266–271.

Vallacher, R. R., & Nowak, A. (1994). (Eds.), *Dynamical systems in social psychology.* San Diego: Academic.

Violanti, J., Marshall, J., & Howe, B. (1983). Police occupational demands, psychological distress and the coping function of alcohol. *Journal of Occupational Medicine, 25,* 455–458.

Violanti, J., Marshall, J., & Howe, B. (1985). Stress, coping and alcohol use: The police connection. *Journal of Police Science and Administration, 13,* 106–110.

Walsh, D. C., Rudd, R. E., & Mangione, T. (1993). Researching and preventing alcohol problems at work: Toward an integrative model. *American Journal of Health Promotion, 7,* 289–295.

Wechsler, H., Davenport, A., Dowdall, G., Moeykens, B., & Castillo, S. (1994). Health and behavioral consequences of binge drinking in college: A national survey of students at 140 campuses. *Journal of American Medical Association, 272,* 1672–1677.

Working Partners for an Alcohol- and Drug-Free Workplace (1998). *Establishing Workplace Substance Abuse Programs.* [On-line] Available: http://www.dol.gov/dol/asp/public/programs/drugs/steps.htm.

Wright, R. S., & Wright, D. G. (1993). *Creating and maintaining the Drug-free workforce.* New York: McGraw-Hill.

Yandrick, R. M. (1996). *Behavioral risk management: How to avoid preventable losses from mental health problems in the workplace.* San Francisco: Jossey-Bass.