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Supervisor tolerance-responsiveness to substance abuse and workplace prevention training: use of a cognitive mapping tool

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Abstract

Supervisor tolerance-responsiveness, referring to the attitudes and behaviors associated with either ignoring or taking proactive steps with troubled employees, was investigated in two studies. The studies were conducted to help examine, understand and improve supervisor responsiveness to employee substance abuse. Study 1 examined supervisor response to and tolerance of coworker substance use and ways of interfacing with the Employee Assistance Program (EAP) in two workplaces (*n* = 244 and 107). These surveys suggested that engaging supervisors in a dialogue about tolerance might improve their willingness to use the EAP. Study 2 was a randomized control field experiment that assessed a team-oriented training. This training adopted a cognitive mapping technique to help improve supervisor responsiveness. Supervisors receiving this training (*n* = 29) were more likely to improve on several dimensions of responsiveness (e.g. likely to contact the EAP) than were supervisors who received a more didactic, informational training (*n* = 23) or a no-training control group (*n* = 17). Trained supervisors also showed increases in their own help-seeking behavior. Procedures and maps from the mapping activity (two-stage conversational mapping) are described. Overall, results indicate that while supervisor tolerance of coworker substance use inhibits EAP utilization, it may be possible to address this tolerance using team-oriented prevention training in the work-site.

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Introduction

For the past 20 years, health education practices have been increasingly applied in work settings, typically through health promotion programs (HPPs) (O'Donnell and Harris, 1994) or employee assistance programs (EAPs) (Oher, 1999). EAPs typically include consultative support for supervisors, worksite training (e.g. stress management) and short-term counseling for employees. Supervisors can play a critical role in both HPPs and EAPs, especially when they become aware of substance abuse or mental health problems in employees. Supervisors can either respond to such problems or ignore them. Proactive responses range from seeking others' input, informal discussions with the troubled employee, consultation with the EAP or HPP, or initiating a drug test. Supervisors can also tolerate problems, i.e. avoid issues or even enable the troubled employee (Hall, 1990; Ames and Delaney, 1992). The concept of *tolerance-responsiveness* is used here to represent supervisory decisions to ignore or take proactive steps with troubled employees. This concept may be of value to health educators who recognize that the success of their efforts can depend on workplace social environment or culture, specifically the role of supervisors in the culture (Heaney and van Ryn, 1996; Peterson and Wilson, 1998; Tessaro *et al.*, 2000).

The term 'tolerance' is often associated with constructive responses among health educators,

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e.g. tolerance for diversity. However, in the context of others' problem behaviors, tolerance can be dysfunctional, e.g. tolerating those who work with a hangover [or tolerance of coworker smoking (Stephens, 1989)]. Research has identified behaviors related to dysfunctional tolerance, including enabling (Roman *et al.*, 1992), problem minimization (Ames and Delaney, 1992) and neutralization of deviance (Robinson and Kraatz, 1998). Borrowing from these studies, the current investigation introduces the concept of dysfunctional tolerance as a potentially useful teaching tool for workplace health educators.

Many factors influence tolerance-responsiveness. EAPs can enhance responsiveness to alcohol problems (Beyer and Trice, 1978; Putnam and Stout, 1982), but supervisors who doubt EAP confidentiality will not refer workers. Supervisors may also be anxious about initiating discussion that encroaches on a coworker's private problems (Donahoe *et al.*, 1998) and such anxiety can be reinforced by a work climate that avoids communication [*organizational codependency* (McMillan and Northern, 1995)].

Generally, two factors appear to facilitate responsiveness: a climate that supports discussion of problems and a positive orientation to the EAP. Hopkins identified psychosocial factors that predict whether supervisors will intervene with a troubled employee, including psychological closeness with workers, managerial support for helping employees and beliefs surrounding helping (Hopkins, 1997). Successful supervisory training programs are often integrated with an EAP, and include performance-based interventions and consultation with a counselor (Roman and Blum, 1996). Supervisors are more apt to talk with troubled workers when an ethos of helping exists (Sonnenstuhl, 1990) and a well-marketed EAP appears critical in building this ethos (Roman, 1990).

As an exploratory study, the current paper used different measures to examine supervisor responsiveness to employee substance abuse, including willingness to talk about issues, to contact the EAP, and both help-seeking and encouragement of coworkers. Study 1 explored the frequency of different supervisor responses to substance-using employees and ways of interfacing with the EAP. These analyses yielded some insights about how to improve EAP utilization. Specifically, our research team proposed that supervisors would benefit from discussing their reasons for tolerance-responsiveness and to learn the benefits of the EAP within that dialogue. To facilitate such dialogue, we developed a new training tool (*two-stage conversational mapping*), and conveyed messages about substance abuse prevention within a program on communication and stress management (Bennett *et al.*, 2000). Study 2 assessed the effects of this training.

Study 1: responsiveness to substance abuse, tolerance and willingness to use the EAP

As noted above, supervisors can ignore problems, confront the troubled employee, or talk about the problem with coworkers, supervisors or the EAP. The first goal of the current study was to assess the relative frequency of these different actions and how these relate to willingness to use the EAP. Two samples of supervisors, from different organizations and distinct types of EAP, were studied. One sample was asked more detailed questions about how supervisors used the EAP (actual contact of EAP versus encouraging others) to explore whether type of previous interface impacts current willingness to recommend the EAP.

Supervisor tolerance of coworker substance use may interfere with this willingness. Previous research shows individuals vary in tolerant attitudes for coworker substance abuse, but no study has examined attitudinal tolerance in supervisors. Lehman *et al.* developed a measure of tolerance by presenting employees with fictional vignettes describing coworker substance use (Lehman *et al.*, 1994). For each vignette, employees responded by indicating if they would work with, cover for or report the coworker. Across vignettes, tolerance increased as a function of history of use. Illicit drug users reported more tolerance than problem drinkers (who did not use illicit drugs) who,

in turn, reported more tolerance than non-users. Reynolds recently showed that higher tolerance associated with less willingness to use the EAP (Reynolds, 1999). The second goal of the current study was to replicate this finding across the two samples of supervisors.

Method

Study sites

Samples were drawn from two municipal workforces in the southwestern US. City 1 (population 480 000) had about 3000 employees. City 2 (population 110 000) had approximately 400 employees (samples excluded uniformed police and fire personnel). Both cities reviewed substance use policy in employee orientation and the EAP provided additional training. City policies included drug testing (applicant, suspicion, random, post-accident) and disciplinary and EAP referral procedures. Health plans included treatment for chemical dependency.

Participants

Supervisors were identified according to self-reports of being 'responsible for formally evaluating and hiring and firing others (as a 'second line' supervisor or 'middle manager').'

City 1. A total of 244 full-time supervisors participated in the survey. The majority were male (70%), aged between 31 and 40 (40%) or older (40%), and had some college (33%) or a college degree (34%). Ethnically, supervisors were 57% white, 23% black and 17% Mexican-American. Most had worked as a supervisor for 3–5 years (21%) or longer (43%). Many held jobs with safety risk (32% drove vehicles or worked with machinery/toxic chemicals) and were responsible for six or more employees (45%).

City 2. A total of 107 supervisors participated in the initial survey. The majority was male (65%), aged between 31 and 40 (32%) or older (59%), and had at least some college (31%) or a college degree (43%). Supervisors were 79% White, 8% Black and 10% Mexican-American. Most had worked as a supervisor for the city for 3–5 years (19%) or longer (41%). Many held jobs involving safety risk (48%) and were responsible for six or more employees (45%).

Survey procedures

Trained research staff administered questionnaires (entitled 'Employee Health and Performance in the Workplace') to employee work groups during working hours on city property. All responses were anonymous, no names were collected and no individual data were given to city officials. Participation was voluntary, using informed consent procedures, and employees could choose to withdraw their participation at any time during the survey. Both surveys took less than 1 h to complete for most employees.

Measures

Previous responsiveness to coworker substance use asked 'If you ever experienced a coworker using alcohol or other drugs, what have you done in response?'. Supervisors responded 'no' or 'yes' to each of five alternatives (Table I). Only those responding yes to any of five items were assumed to have experienced previous coworker use and included in analyses. For City 1, $n = 133$ (54% of supervisors) and for City 2, $n = 51$ (46% of supervisors). *Tolerance of coworker substance use* involved supervisors reading three vignettes that described a coworker who used marijuana on a recreational basis, smoked marijuana at work or drank alcohol heavily. Supervisors rated the extent to which they regarded the behavior as acceptable, whether they would cover for the coworker and whether they would report the coworker to a superior. Response format was from (1) 'strongly disagree' to (5) 'strongly agree'. Responses across vignettes were averaged together with higher scores indicating higher levels of tolerance. *Willingness to recommend the EAP* asked 'How likely would you be to recommend the EAP to a coworker who you thought needed help?' Response format was from (1) 'very unlikely' to (5) 'very likely'.

The City 2 survey asked eight questions about *encouragement and help-seeking*. The items were used in one of two scales (see Figure 1). *Encouraged others* contained three items asking if the

Table I. *Supervisors' previous responsiveness to, current tolerance of, employee substance use and willingness to use EAP (two samples)*

	Response to item or scale		Correlation with willingness to recommend EAP	
	City 1 (n = 133)	City 2 (n = 51)	City 1	City 2
Previous responsiveness to coworker use[a]				
I ignored situation or looked away	16%	8%	–0.15	–0.32*
I discussed with a fellow worker	63%	51%	0.17	–0.06
I talked with coworker I saw/suspected using	63%	69%	0.10	0.12
I talked with my supervisor	69%	82%	0.17*	0.30*
I contacted the EAP	44%	30%	0.07	0.11
Tolerance for coworker substance use (range 1–5)[b]	1.73	1.81	–0.24**	–0.41**
Willingness to recommend EAP (range 1–5)[b]	3.83	3.86	–	–

*N*s vary slightly due to missing cases; $^{*}P < 0.05$; $^{**}P < 0.01$.
[a]Percent indicating 'yes'.
[b]Means are reported in columns.

supervisor encouraged coworkers or called the EAP to help someone (e.g. 'Have you ever encouraged a co-worker to call the EAP for help with a work-related problem?'). *Sought help or was encouraged* contained five items asking if the supervisor had called the EAP for problems or had been encouraged to get help by a coworker or supervisor. Response options for each item were 'no,' 'yes, but not in the last 6 months' or 'yes, in the last 6 months'. Positive response (yes) to any item within these scales yielded a score of '1' (versus '0' for a consistent set of 'no' responses). This yielded those supervisors who encouraged others to get help (n = 43; 41%) and those who sought help or were encouraged to get help (n = 18; 17%).

Results and discussion—Study 1

The first two columns in Table I show the percentage of supervisors reporting previous response to coworker substance use. These accounts refer to the past in general and may recall a time before respondents were in supervisor roles. Supervisors were least likely to have ignored the situation (*City 1* = 16% and *City 2* = 8%) and most likely to have talked with their own supervisor (69 and 82%). Supervisors were also less likely to have contacted the EAP (44 and 30%) than to have approached coworkers or suspected users. Additional analyses indicated that the majority of supervisors who used the EAP or who talked to suspected users were also those who had previously consulted with supervisors.

Table I also reports the Pearson correlations between previous behaviors and willingness to recommend the EAP. In both cities, there was a positive relationship between this willingness and previous talk with a supervisor (rs = 0.17, 0.30; Ps < 0.05). To a lesser extent, ignoring substance use in the past also correlated negatively with willingness (*City 1*, r = –0.15; P = NS; *City 2*, r = –0.32; $P < 0.05$). Finally, Table I shows a negative relationship between tolerance and willingness in both samples (rs = –0.24, –0.41; Ps < 0.01) suggesting that supervisors who were less tolerant of marijuana use and heavy drinking in their coworkers were more likely to recommend the EAP. Another finding (not shown in Table I) indicated a negative relationship between previous talk with supervisor and tolerant attitudes in City 1, r = –0. 41, $P < 0.001$. A similar negative relationship was found in City 2, but it was not significant (r = –0.13).

Figure 1 displays the percent of supervisors who reported encouragement and help-seeking within

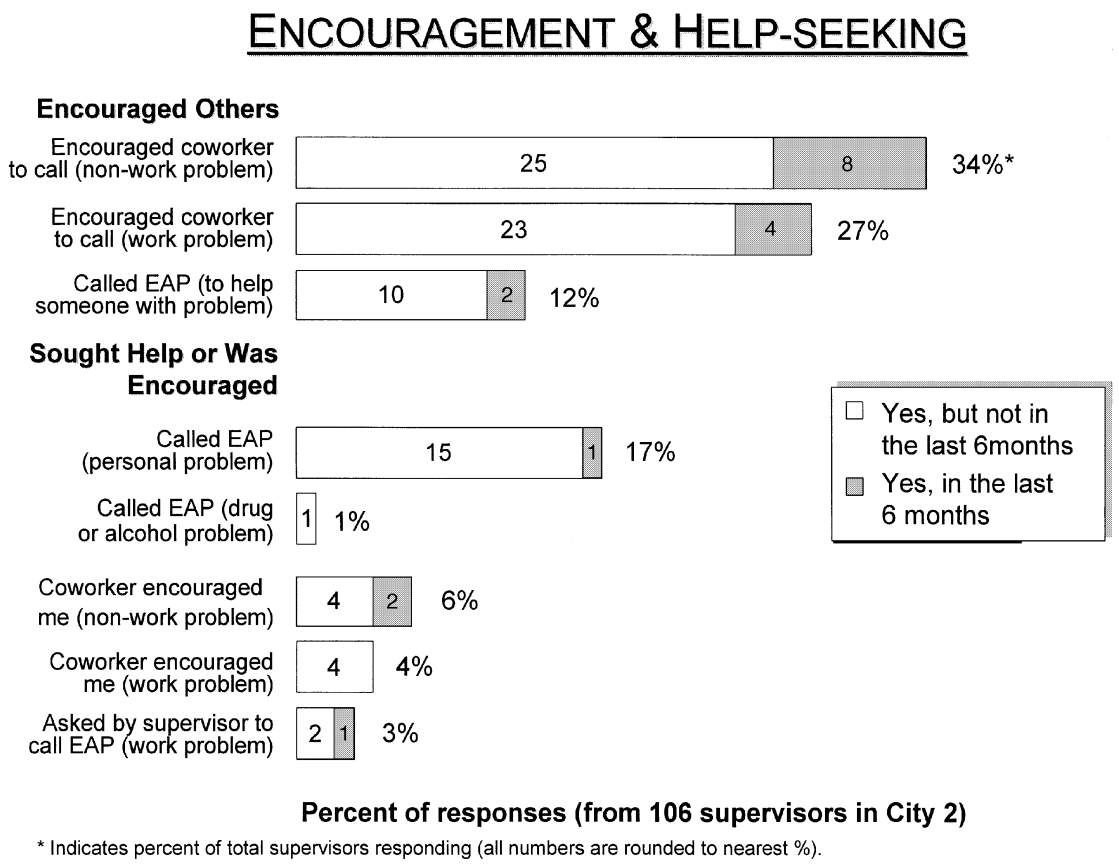

Fig. 1. Supervisor interface with the EAP (percent encouragement and help-seeking).

the past 6 months (gray portion of bar) and prior to the past 6 months (white portion). The most frequent type of behavior was encouraging coworkers to call the EAP for a non-work problem (34%; 8% in the last 6 months). Fewer supervisors called the EAP for a personal problem (17%) or to get help for someone else (12%). Reports that others had encouraged the supervisor to get help were less frequent (below 6%). Correlation analyses, exploring the relationship between the measures of encouragement and help-seeking, and willingness to use the EAP, yielded no significant findings. However, supervisors with low tolerance were more likely to have encouraged coworkers to use the EAP ($r = -0.24$, $P < 0.05$).

The above findings suggest that supervisors who previously talked with their superiors were more likely to have used the EAP and had increased willingness to use the EAP in the future. Similarly, lower attitudinal tolerance for coworker use correlated with willingness to use the EAP and encouragement of others to use the EAP (City 2). Two interpretations may be offered for the finding that contacting the EAP was less frequent than talking with others. First, respondents may have addressed problems before having to turn to the EAP. Research suggests that alcohol problems can be dealt with through peer discussions, without involving formal counseling [e.g. (Sonnenstuhl, 1996)]. Second, some supervisors might stigmatize the EAP. In fact, supervisors with tolerant attitudes towards substance use were more reluctant to

recommend the EAP for any help (not just substance abuse). This may reflect a widely discussed barrier to EAP utilization (Derr and Lindsay, 1999), i.e. the mistaken belief that the EAP serves only serious substance abusers and is not a general resource for prevention or health promotion.

These findings suggest three factors need to be emphasized in attempts to improve supervisor responsiveness:

(1) Supervisors should find their own superiors approachable.
(2) Because talking with others is more common than EAP contact, it may be helpful to integrate the EAP into such conversation. Supervisors may view the EAP 'as a last resort' as it is not part of the information network they commonly rely on when interpreting policy and dealing with problems.
(3) Because tolerance was associated with previous supervisor talk and EAP use, it could help supervisors to talk about and self-assess their tolerance.

The mechanism through which self-assessment might lessen tolerance is not clear. However, when tolerant supervisors are made aware that they have various options for responsiveness, such as talking to a superior or to the EAP, they may reduce tolerance as a means of coping with difficult situations. They may also reduce any cognitive dissonance associated with not following policy (Festinger, 1957). The training in Study 2 was designed to address these factors. To help increase supervisor approachability, supervisors were trained along with their own superiors when possible and encouraged to talk about problems openly. To lessen tolerance, trainers asked supervisors to describe both the costs of tolerance and the benefits of responding to problems.

Study 2: cognitive mapping and evaluation of a prevention training program

Workplace programs have typically applied two strategies in encouraging employees to seek out help for substance use problems. The *informational* strategy emphasizes increasing knowledge about formal policy. These policies include drug testing, discipline guidelines and provide counseling to those who need help (Wright and Wright, 1993). Employees learn policy through orientation packets or seminars on employee benefits (EAP, health insurance). The *psychosocial* strategy emphasizes informal support within the workplace that can aid in prevention and early intervention. This strategy is rooted in constructive confrontation programs (Googins, 1989) and promotes discussion rather than avoidance of stressors, and is similar in principle to Heaney and Ryn's participatory empowerment program for workplace education in stress reduction (Heaney and Ryn, 1996).

The purpose of Study 2 was two-fold. First, it explored supervisor rationales surrounding their tolerance-responsiveness. Second, it compared the effects of two programs—emphasizing either psychosocial or informational strategies—on diverse aspects of responsiveness. The psychosocial or 'team' training highlights a new training technique, two-stage conversational mapping. The goal is to help supervisors talk about their tolerance and responsiveness in hopes of enhancing their willingness to address issues in the future.

Applying cognitive mapping to the drug-free workplace

Various labels have been given to strategies where students use visual representations of thoughts or ideas and connections or links between these thoughts. 'Cognitive' or 'node–link' maps (Novak and Gowin, 1984) have been shown to increase memory and critical thinking in education [e.g. (Czuchry and Dansereau, 1998)], to improve the therapeutic process in substance abuse treatment (Knight *et al.*, 1994), and to enhance learning in work organizations (Senge, 1994). Students work independently or with others to write or draw a concept or idea about something real or imagined. This map is then used to elaborate, revise or reject various hypotheses, assumptions or other knowledge related to a topic or subject.

This technique was used in a group setting for

several reasons. First, substance use policies are often implemented according to social/informal strategies (Bennett and Lehman, 1997). As suggested in Study 1, supervisor willingness to use the EAP may be influenced by previous contact with supervisors and tolerant attitudes (Table I). Open discussion about these influences may help supervisors distinguish formal and appropriate, from informal and possibly inappropriate, use of policy. Second, supervisors are anxious about dealing with troubled employees for a variety of reasons (e.g. hard to get along with, fear of retaliation). Donahoe *et al.* suggest that group discussion about such workers can allay anxiety and improve EAP utilization (Donahoe *et al.*, 1999). Third, little is known about supervisors' own reasons for tolerance. Since research often uses pre-formulated questionnaires [e.g. (Googins, 1989)], study of supervisors' shared schemas about tolerance may shed light on ways to improve helping.

Comparing team-oriented versus informational training: hypotheses

Study 2 compared the team and informational approach. Only the team training focused on supervisor responsiveness. It was hypothesized that team-trained supervisors would improve in responsiveness, specifically:

- Increased willingness to discuss problems, and likelihood of using and trust in the EAP (Hypothesis 1).
- Actual increased encouragement/help-seeking (Hypothesis 2).

Method

Study site and participants

The study site for the training was City 2 and participants were the supervisors ($n = 107$) identified in Study 1. This study assessed supervisors who had completed a pre-training survey and, following the training period, a post-training survey (69 out of the 107 total supervisors). Generally, there were no demographic or job (i.e. safety sensitive jobs) differences between supervisors included and the 38 excluded from analyses (χ^2, all Ps > 0.10). Mexican-American supervisors were more represented ($n = 9$; 8% of total) than excluded ($n = 0$; χ^2, $P < 0.05$). Six months following training, 58 supervisors were administered a third, follow-up survey.

Experimental design

The study was conducted in separate phases: random assignment and pre-training survey, training period, post-training survey, and follow-up survey. The time from the pre- to post-training survey spanned 5–8 weeks.

Random assignment and pre-test survey. Supervisors from all work groups, excluding uniformed fire/police, were randomly assigned to one of three experimental conditions: team training ($n = 29$), informational training ($n = 23$) or a no-training control group ($n = 17$). Many groups had multiple supervisors. Employees were assigned to the same condition as their supervisor.

Team-oriented training. Two supervisor trainings were conducted. Supervisors attended two 4-h sessions and were trained separately from employees for two reasons. First, the mapping activity and other training exercises asked supervisors to speak candidly about their attitudes. The presence of employees would have constrained disclosure. Secondly, Session 1 prepared supervisors for the assignments and activities that their employees would receive in their own training sessions. Supervisor training sessions consisted of from seven to 13 individuals.

The *team-oriented training* consisted of five separate components, with the added mapping activity for supervisors. The components were:

(1) *Relevance*, which sought to increase supervisors understanding of the importance of substance abuse prevention and their role in prevention.
(2) *Team ownership of policy*, which explained that policy is most effective when seen as a useful tool for enhancing safety and well-being for the whole work group.
(3) *Understanding stress*, where supervisors self-

assessed their coping style, identified stressors and reviewed methods for coping.

(4) *Understanding tolerance*, which taught how tolerance can become a risk factor for groups.

(5) *Support and encourage help*, which sought to encourage appropriate help-seeking and help-giving behavior. This module reviewed positive and negative aspects of grapevine communication (rumors, gossip), and tips and guidelines for approaching employees who have a problem. Supervisors also practiced a model for encouraging help (NUDGE: *N*otice–*U*nderstand–*D*ecide–use *G*uidelines–*E*ncourage) through role-playing.

Supervisor mapping activity. This activity represents an adaptation of node–link mapping for group counseling (Knight *et al.*, 1994). The current adaptation, called *two-stage conversational mapping*, consisted of two stages. Stage 1 (Session 1, Component 2) reviewed policy on coaching, counseling and discipline. Supervisors viewed slides that distinguished formal and informal (or 'unwritten') aspects of policy. The slides suggested that supervisors either take action (respond) or do nothing (tolerate) when faced with substance abuse because of personal background (e.g. previous experience with drugs or alcohol), work experience (e.g. training, discussions about drug testing) or situations (e.g. accidents, calls for random testing).

The trainer then asked open-ended questions: 'In your experience as a supervisor, what leads you to take action or do nothing?' and 'What are your own reactions to what we just reviewed?'. Most supervisors participated in the discussion, which lasted between 15 and 20 min. All comments were written onto flip charts. Between Session 1 and Session 2, the trainer and an assistant transcribed the notes and derived a node–link map using techniques described by Dansereau and Cross (Dansereau and Cross, 1992). For Stage 2, several maps were derived from the two supervisor trainings and presented on overheads in Session 2. These were used to generate a more in-depth discussion, which lasted about 30 min for both groups. A final map synthesized this discussion within each of the two supervisor trainings (see Figure 2).

This second discussion was critical for several reasons. It allowed the trainer to ask more probing questions about the nature of the links between nodes so supervisors could better examine their implicit cognitive models of tolerance and of policy. The trainer also modeled listening skills, showing concern for the supervisor's perspective by displaying how he understood previous comments from Stage 1 and also asking for feedback. Mapping was promptly followed by the component on Supporting and Encouraging Help, where training emphasized listening skills and using policy (EAP) as a tool for getting help.

Informational training. Supervisors and employees were trained together in two didactic sessions that did not encourage discussion. In any informational session, one to five supervisors were present. The training was derived from human resource orientation practices in the current worksite. Employees received 2 h of information about employee substance abuse and workplace policy, including a video about the negative effects of different substances (e.g. alcohol, marijuana), a review of policy (e.g. testing, disciplinary procedures) and a quiz. Employees also received 2 h of information about their EAP, including a video, a brief quiz and a review of all EAP services.

Measures

- *Pre–post changes in responsiveness*. In both pre- and post-training surveys supervisors were asked about trusting coworkers with private information. Responses varied from (1) 'strongly disagree' to (5) 'strongly agree'. Two items asked about likelihood of using and trusting the EAP. Responses varied from (1) 'very unlikely' to (5) 'very likely.' For each item, difference scores were used to aid in data analysis by subtracting pre-training from post-training scores.
- *Follow-up assessment of encouragement/help-seeking*. The same two measures from Study 1 were used in pre-test and follow-up (6-month) surveys: *sought help or was encouraged* or

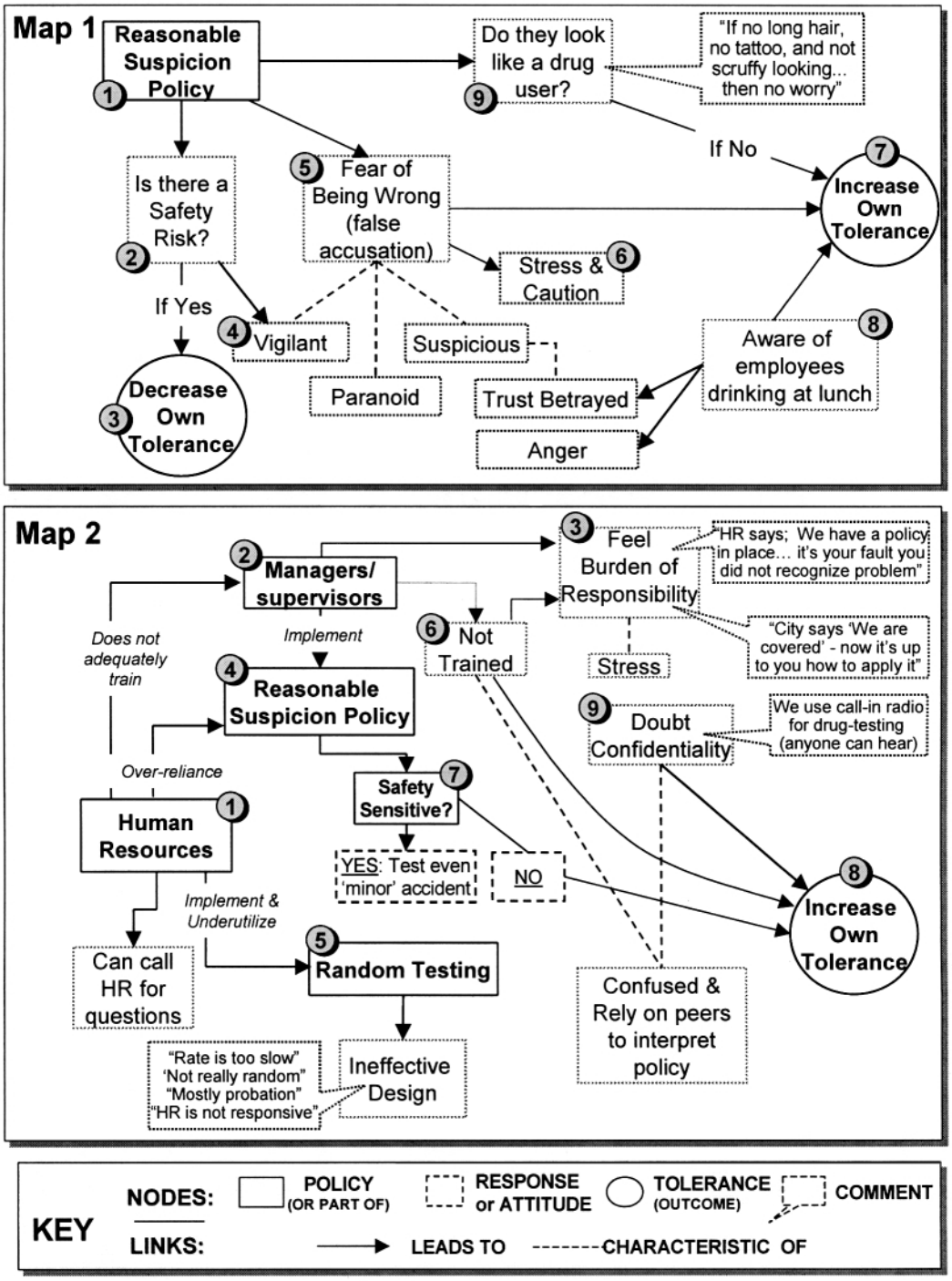

Fig. 2. Results from two-stage conversational map activity (two supervisor maps).

encouraged others to seek help. Reported behaviors during the past 6 months, were scored as '1.' Supervisors indicating 'no' or 'yes, but not in the last 6 months' received a '0' score.

Analyses

Repeated measure ANOVAs assessed between-group differences in changes from pre- to post-survey ratings of responsiveness (Hypothesis 1). Pre-post difference scores were used to assess changes within each condition as well as joint change across all items using MANOVA analysis. These difference scores assessed whether changes in the team condition differed from the informational or control groups. Because of the small sample, the effect size of differences between conditions (**d** statistic) was used [(Cohen, 1988) formula 8.2.5]. Repeated measures ANOVAs also assessed between-group differences in changes from pre-test to follow-up (6 month) survey ratings of help-seeking and encouragement (Hypothesis 2).

Results—Study 2

Qualitative results: description of policy maps

Figure 2 shows maps that were constructed from discussion that began in Session 1, and was revised and elaborated in Session 2. Key nodes are numbered in the figure and in the following narrative. (The mapped sequence does not correspond one-to-one with the actual sequence. Participants raised issues simultaneously and the facilitator arbitrarily selected a participant to talk first. Spontaneous comments were encouraged and the maps shown in Figure 2 represent the general sequence of ideas, if not the flow of conversation.)

Map 1 shows that discussion focused on affective reactions to reasonable suspicion policy (1). Initially, a participant asked the question 'Is there a safety risk?' (2). All agreed that the policy helped to decrease their tolerance for substance abuse when safety was an issue (3). Safety risk also led supervisors to be extra vigilant (4) and the conversation then focused more heavily on supervisor fear of making a false accusation (5). This fear around implementing policy overlapped with self-conscious feelings of paranoia and suspiciousness. This complex of fear–vigilance–paranoia resulted in stress and a more cautious approach (6). Rather than make a false accusation, their increased self-consciousness led supervisors to increase tolerance (7). As part of the discussion about suspicion, one supervisor talked about a once-trusted employee that was discovered using alcohol at lunch with coworkers (8). As a result of this discovery, anger and feelings of betrayal contributed to a sense of helplessness and increased tolerance. The tone of the conversation suggested that supervisors chose tolerance as the path of least resistance (rather than deal with the stress of addressing these emotional issues). Finally, reasonable suspicion policy was associated with a reliance on stereotypes of drug users (9). A supervisor said: 'If they don't have long hair or a tattoo and they're not scruffy looking than I don't worry about it'. Many laughed and agreed with this comment.

The dialogue used to formulate *Map 2* focused less on affective reactions to policy and more on perceptions of Human Resources (HR) and responsibility. Participants felt that the HR department (1) did not adequately train managers (2) in policy, resulting in feeling the burden of responsibility (3). HR was seen as over-relying on reasonable suspicion policy (4) and, consequently, under-utilizing random testing (5). This perceived split between testing and reasonable suspicion, along with the lack of training (6), contributed to the central discussion on how managers bear the burden for implementing policy (3). Participants viewed policy as only a way for HR to cover legal liability requirements. Participants made comments about the message HR sends managers. For example, 'We have a policy...It's your fault you did not recognize the problem'. While some criticized HR and random testing (e.g. 'rate is too slow'), others felt that HR was responsive to questions about testing and other aspects of policy.

Unless working in safety sensitive jobs (7), supervisors were more apt to be tolerant (8). They doubted confidentiality (9) of testing because of incidents where supervisors used call-in radios such that anyone could hear an employee was

being sent to testing. Ultimately, lack of training (6), working in jobs that were not safety sensitive (7) and confidentiality concerns (9) led to confusion and increased tolerance for problems (8).

While mapping identified cognitions, it also helped some express emotional reactions. These included fear of incorrect implementation, a felt lack of support from administration, doubts about confidentiality and associated stress. The facilitator referred back to written policy and the EAP only after listening to these reactions in an attempt to help make policy more meaningful and 'user-friendly'. It was assumed that this conversation helped supervisors integrate the EAP into their schemas of tolerance-responsiveness.

Quantitative results: comparing training conditions

It was hypothesized (Hypothesis 1) that, in comparison to others, team-trained supervisors would show increased trust in discussing problems, increased trust in EAP and (most importantly) increased willingness to contact the EAP. The MANOVA analysis indicated that the team training had an overall joint effect across these dimensions of responsiveness, $F = 2.66$, $P = 0.04$. For example, scores on likelihood of contacting the EAP were higher after the training ($M = 3.64$) than before the training ($M = 3.07$), $T = 2.52$, $P = 0.02$. Importantly, these significant pre-post changes were not seen within either the informational or control conditions. Table II also shows the results of the repeated measures ANOVA comparisons of the three conditions. Examination of effect sizes (**d**) (Table II, final two columns) showed team training had a relatively strong effect in improving responsiveness. The strongest effect was seen in an increased confidence in talking about problems with coworkers (less fear of the workplace grapevine). The effect of the team training was 1 SD above the control condition (**d** = 1.00).

Table III shows, for each experimental condition, the number (and proportion) of supervisors who reported seeking help or were encouraged to seek help and the number who encouraged others. Retrospective reports are shown for the 6 months prior to the training (pre-test survey) and 6 months following the training (follow-up survey). The team trained supervisors were most likely to have reported that they had sought help or were encouraged to seek help; following training (seven of 23), compared to before training (one of 23), Time×Condition, $F(2,55) = 4.43$, $P = 0.016$.

Discussion—Study 2

The purpose of mapping was to help supervisors openly discuss assumptions and beliefs about policy, and use this discussion to clarify policy details and supervisor responsibility. Because this activity was only one of several in an 8-h training, it is not possible to say whether results could be attributed to mapping. However, the qualitative maps (Figure 2) do offer insights which—combined with other results—suggests ways that supervisors benefited from training.

Supervisors' accounts of their lack of responsiveness/tolerance of substance abuse pointed to several inhibiting factors, including stereotypes about drug users, fear of being wrong when using reasonable suspicion policy, awareness of others' violation of policy, doubt about confidentiality and relaxed concerns in non safety-sensitive jobs. Both maps pointed to the influence of social factors at work, such as relying on peers to interpret policy, feelings of betrayal, and increased self-consciousness and fear of being wrong.

Analysis of actual change showed—only for the team condition—increases in supervisor's likelihood of communicating to an EAP, less fear of the workplace grapevine and a stronger belief that the EAP would protect employee confidentiality. Most importantly, 6-month follow-up indicated that supervisors in the team training (and, to some extent, the informational training) actually increased help-seeking and encouragement behaviors. These results suggest that training can improve trust in, and willingness to use, the EAP. The team-training may help supervisors improve attitudes toward help-seeking and increase responsiveness when faced with a troubled employee. It should be pointed out that many employees of

Table II. *Effects of training on supervisor trust and willingness to use EAP: pre–post comparisons, ANOVA results and effect size of contrasts*

	Team (T) (n = 29)		Informational (I) (n = 23)		Control (C) (n = 17)		Repeated measures ANOVA (Time × Condition)		Effect size (**d**)	
									T versus I	T versus C
	Pre	Post	Pre	Post	Pre	Post	F	P		
I feel confident telling problems to coworkers without fear information will leak into the grapevine	**2.75**	**3.53****	3.22	3.43	3.59	3.18	3.84	0.010	0.44	1.00
I trust coworkers with private information about problems I am having with other coworkers	2.96	3.29	2.95	2.65	2.88	3.00	1.57	0.216	0.48	0.16
I am likely to contact EAP for advice if coworker has problems that interfere with work	**3.07**	**3.64***	2.70	3.09	3.13	3.33	7.42	0.008	0.16	0.31
It is likely that supervisors would not find out if an employee called the EAP with a problem	**2.70**	**3.48****	3.35	3.39	3.88	3.88	2.83	0.066	0.62	0.57

Bold means are significantly different from each other. $^{*}P < 0.05$; $^{**}P < 0.01$. *N*s vary slightly due to missing cases.
MANOVA test for the hypothesis of no overall condition effect: F *(for Roy's Greatest Root)* $(4,59) = 2.66$, $P = 0.04$.
Effect size calculations (**d**) are computed for comparisons between the pre–post change scores.

Table III. *Supervisor self-reports of help-seeking/encouragement: pre-test and 6-month follow-up comparisons (three experimental conditions)*

	Team (T) (n = 23)		Informational (I) (n = 21)		Control (C) (n = 14)		Repeated measures ANOVA (Time × Condition)	
	Pre	Follow-up	Pre	Follow-up	Pre	Follow-up	F	P
Sought help or was encouraged	1 (0.04)	7 (0.30)	0 (0.00)	1 (0.05)	2 (0.14)	0 (0.00)	4.43	0.02
Encouraged others	1 (0.04)	5 (0.22)	3 (0.14)	5 (0.23)	3 (0.21)	2 (0.14)	1.44	NS

Proportions are shown in parentheses.

those supervisors receiving the mapping exercise also took the employee version of the team-training. Supervisors' increased openness may have been due to the holistic effect of group participation. Also, the team training lasted 8 h and the informational training is 4 h. Thus, differences between the groups could be attributed to length rather than content or structure of the training.

Summary and general discussion

In general, these findings show that training can improve responsiveness in supervisors. Specifically, the use of cognitive mapping to surface and address supervisor concerns about dealing with troubled workers appears to be an effective research tool and prevention technique. While the current study focused on substance abuse, results should be of interest to workplace health educators who seek to train supervisors in being responsive to other problems [e.g. stress, harassment, coworker hostility/violence (Bennett and Lehman, 1999)]. Before discussing results further and because of the exploratory nature of the current study, we review the various definitions of responsiveness used here.

Responsiveness was examined in Study 1 through self-reports of previous responses to coworker substance use, tolerance and willingness to recommend EAP. Study 2 assessed changes in reported likelihood of doing something about a hypothetical employee whose home-life was interfering with work as well as changes in reported helping-related behaviors. Across studies then, supervisor responsiveness was examined as past behavior, current willingness, changes in willingness and actual change in behavior. Supervisors also shared their own ideas in mapping. This multimethod approach may be a strength of the current investigation as similar findings across two samples (Study 1) and two studies offer insight into processes surrounding responsiveness.

Further research is necessary to more carefully articulate the dimensions of responsiveness-tolerance. For example, supervisors who reported more responsiveness on behavioral (talk with supervisor) and attitudinal (willingness to use EAP) indices also reported less tolerant attitudes. More attention should be given to the precise attitudinal and behavioral facets of responsiveness as well as attitude–behavior relationships. Also, items used in Study 2 may not represent core components of responsiveness and scale development is encouraged in future studies.

Implications

With the growing integration of worksite health initiatives (HPPs, EAPs and safety programs), there is a need for conversation about issues that concern all professions. The ideas discussed here may be useful in promoting this conversation. In a special issue on workplace health promotion in this journal

(Feldman, 1987), Gordon argued that integration is crucial for the success of workplace programs (Gordon, 1987). Referring to drug testing as an example where integration is needed, Gordon wrote:

> Trust is an essential ingredient in any successful health-promotion program. Unfortunately, in many cases, company personnel have not earned and do not have worker's trust. The recent often hysterical debate on workplace drug testing has worsened the situation. It is difficult to participate in a hypertension screening program conducted by the company nurse on Monday when the same nurse will be tapping you on the shoulder on Thursday for a random drug test. (p. 70)

The issue of trust was a core theme in the cognitive map activity; supervisors who received that activity improved in their trust of the EAP. As the maps suggest, workers may be as concerned about drug testing now as when Gordon wrote almost 15 years ago. That worksite training might improve trust should be of great interest to health educators, especially since the follow-up data indicate improved help-seeking among supervisors in the team training.

Distrust may also be an important contributor to supervisor tolerance. Importantly, affective reactions to policy were bound up with employee failure to comply with policy. One supervisor had strong feelings of betrayal (Map 1) and a supervisor's lack of discretion with call-in radio increased doubt about confidentiality (Map 2). Supervisors saw reasonable suspicion policy as straining relations with HR. Managers felt that increased responsibility brought about by this policy required complementary support from HR. The lack of support resulted in supervisors relying on peers to interpret policy. This sequence of events (as narrated by supervisors) supports the view of substance abuse policy as a social construction (Bennett and Lehman, 1997) and supports the work culture as critical for health promotion [e.g. (Tessaro *et al.*, 2000)].

The findings also have implications for policy. When safety was an issue, supervisors accepted their role in the surveillance process. At other times, however, supervisors were ambivalent or felt unnecessarily burdened by policy. This suggested an organizational split between policy definition and implementation, underlined by supervisors' confusion about policy and beliefs about ineffective testing designs. This split reflects what Cavanaugh and Prasad have referred to as the symbolic function of policy, i.e. the purpose of policy may be to legitimate the organization in the eyes of stakeholders who may be concerned about drugs (Cavanaugh and Prasad, 1994). In the day-to-day reality, however, organizations may not have the resources to support supervisors in policy implementation. To reduce supervisor burden, policies should move beyond safety concerns and provide behavioral guidelines to promote responsiveness.

Recommendations for worksite health education

The above analysis suggests the following guidelines for worksite health educators who train supervisors.

- Whenever possible, health promotion trainers should set aside time to facilitate a conversation that allows supervisors to share their concerns. Trainers should respond to these concerns with sensitive responses that integrate program material with policy from the company. Cognitive mapping provides a focused activity for this approach.
- For health promotion programs that deal with mental health/substance abuse issues, educators should consider the concept of tolerance-responsiveness. Supervisors have difficulty in decision making when faced with workers who bring personal problems to work. By discussing options for responsiveness, it may be possible to reduce supervisor stress surrounding policy implementation, lessen dysfunctional tolerance of various behavioral risks and improve the work climate.

Limitations and strengths

There are several limitations and strengths of these studies that should be taken into consideration. Small sample sizes limit the power of analyses and distinct organization factors were not examined. Not all workplaces have reasonable suspicion policies, and many have a lower proportion of safety sensitive jobs. In order to assess organizational factors, research would have to assess various organizations with different policies (Beyer and Trice, 1978). Similarly, all findings are based on self-report. To correct for such limitations, future studies should assess actual EAP utilization in larger samples and multiple organizations with different policies and EAP programs. Despite these problems, the positive impact of training suggests its usefulness. Also, this study developed a mapping activity that serves training and evaluation purposes. Our research team used multiple methods (qualitative and quantitative) and two distinct samples to explore hypotheses and based conclusions on consistent findings. Finally, hypotheses were informed by theory and research and were tested using random assignment and a control group design.

Conclusion

In their investigation of workplace alcoholism policies, Beyer and Trice showed that supervisors have the most important role in implementation, and supervisors who 'felt left out' of the policy diffusion process were least apt to implement policy (Beyer and Trice, 1978). The current team-oriented training may help such disenfranchised supervisors. Compared to an informational training and control group, the team training resulted in the greatest change in help-seeking. Moreover, as the best predictors of a positive orientation to (and use of) the EAP were talking with supervisors and lower tolerance (Study 1), any training that can increase supervisors' willingness to talk about problems should be beneficial. Supervisors play a central role in the transmission of policy and workplace health promotion efforts. We strongly advocate the use of workplace training to aid supervisors in sending a message of help, support and responsiveness rather than a message of tolerance.

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