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Professional Demeanor of Chronically Unemployed Cocaine-Dependent Methadone Patients in a Therapeutic Workplace

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Abstract

This study assesses the frequency that users of illicit drugs display unprofessional behaviors in an employment setting. This research was conducted in the Therapeutic Workplace, a model employment-based treatment program for chronically unemployed adults with long-histories of illicit drug use. Unemployed adults in methadone treatment, who were opiate and cocaine dependent, showed signs of injection drug use, and recently used cocaine were hired to work for 4 hours every weekday for 7 months. Results show that while the overall incidence of many undesirable behaviors is low, a small percentage of participants had serious workplace behavior problems that might limit their success in community workplaces. This study suggests that unprofessional behavior in the workplace could contribute to chronic unemployment in this population.

Keywords

Employment; Heroin Addiction; Cocaine Addiction; Contingency management; Reinforcement; Vocation rehabilitation

Chronic unemployment is a serious problem among individuals with long histories of illicit drug use, and has been associated with continued drug use, poor treatment outcome, and criminal activity (Platt, 1995). A recent review (Magura et al. 2004) showed that employment interventions for unemployed adults who have histories of drug addiction have had mixed effects. Some interventions had little or no effect in increasing employment (e.g., Coviello et al. 2004; Hall et al. 1981b; Butler et al. 2004; Lidz et al. 2004); others increased the percentage of individuals who obtained paid employment (e.g., Hall et al. 1981a; Staines et al. 2004). Most evaluations of employment interventions reviewed examined whether individuals exposed to the employment interventions obtained a job. However, little research has been conducted to examine the extent to which program participants maintain employment over extended periods of time. The information that is available on longer-term outcomes suggests that many intervention graduates who obtain employment do not reliably maintain their employment over time (e.g., Platt et al. 1993; Kemp et al. 2004; Dickinson and Maynard, 1981).

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Evaluations of the few intensive programs that provide job skills training and supported employment show that many participants fail even to maintain their supported employment jobs and many who obtain competitive employment fail to maintain those jobs overtime (e.g., Dickinson and Maynard, 1981; Kemp et al. 2004). One of the most extensive and informative studies of employment interventions for illicit drugs users evaluated the effects of an intensive supported work intervention in 1,433 adults who were unemployed and who had been in substance use treatment within 6 months of enrollment in the study (Dickinson and Maynard, 1981). Participants were randomly assigned to receive the supported employment intervention or to a control condition. Supported employment participants could work in supported jobs for between 12 and 18 months. The supported jobs provided a relatively low wage, on-the-job training and supervision in settings such as construction, manufacturing, parks, and day-care; a gradual increase in the requirements for attendance and performance; and the opportunity to increase earnings through bonuses and promotions for good performance and attendance. Overall, the supported employment significantly increased employment during the first 15 months that the supported jobs were available, as well as at the 36-month assessment time point, 18 months after the supported employment intervention ended. However, careful review of the data in this study shows the difficulty that some participants had in maintaining employment over time. First, participants only stayed in their supported jobs for an average of 6.7 months, well below the maximum time allowed (i.e., between 12 and 18 months), and only 8.4% of the participants worked in the supported jobs for the maximum allowable time. Second, although over 70% of participants obtained competitive employment at some point in the study, only 49% were still employed at the 36-month time point. Thus, at least 30% of the individuals who obtained a competitive job did not maintain that job over time. The authors noted that a fluctuating labor market the time of the study might have affected job attainment. At that time, labor conditions were poor, but improving.

Although this literature provides some evidence that many adults who have histories of unemployment and drug addiction do have difficulty maintaining employment, it offers little insight to why these individuals have this difficulty. The study by Dickinson and Maynard (1981) provided some rare evidence that offered a possible explanation. Almost half of the participants in that study (43%) were terminated from their supported employment jobs due to poor performance. "Poor performance" included a wide range of problems: conflicts with the boss or crew members, use of drugs or alcohol, illegal activities or incarceration, absenteeism, poor punctuality, and low productivity. Unfortunately, the analyses do not provide a statistical breakdown of the reasons for termination. Nevertheless, these data suggest that for many users of illicit drugs, unproductive or inappropriate workplace behaviors may affect their ability to maintain employment.

This study was designed to characterize how adults who have long histories of unemployment and drug addiction behave while employed in a supported workplace to determine if they engage in behaviors that might jeopardize their long-term employment success. This study was conducted in a model employment-based treatment program for chronically unemployed adults who have long-histories of drug addiction. This program, which we have referred to as a Therapeutic Workplace (Silverman et al. 2001; Silverman et al. 2002; Silverman et al. 2005), employs principles of operant conditioning to achieve its therapeutic goals (Silverman, 2004). The Therapeutic Workplace has three main objectives: 1) to promote and maintain drug abstinence; 2) to provide intensive training to prepare participants for gainful employment; 3) to provide supported employment. The Therapeutic Workplace intervention is divided into two phases, a training phase and an employment phase. In both phases, participants are hired and paid to attend the workplace several hours every weekday. Throughout both phases, empirically based principles and procedures of operant conditioning (such as reinforcement, stimulus discrimination training, and response

shaping) are applied to maintain attendance, to teach needed skills, to promote productivity, and to initiate and maintain drug abstinence. To promote drug abstinence, throughout both phases of the intervention, participants are required to provide objective evidence of recent drug abstinence to gain access to the workplace and to maintain the maximum rate of pay. During the training phase, participants are paid to work on intensive training programs designed to prepare them for gainful employment. Once participants become skilled and abstinent in the training phase, they progress to the employment phase during which they are employed in an income-producing supported business. To facilitate its implementation and scientific evaluation of the intervention, the Therapeutic Workplace intervention has been computerized in a web-based application (Silverman et al. 2005).

The Therapeutic Workplace provides a unique opportunity to observe and to conduct rigorous analyses of the workplace behaviors of adults who have long histories of chronic unemployment and drug addiction. Prior research has provided detailed data showing that many Therapeutic Workplace participants who progress to the employment phase of the intervention show problems of poor punctuality and erratic attendance (i.e., they fail to work complete work shifts reliably; Wong, Dillon, Sylvest, and Silverman, 2004a; Wong, Dillon, Sylvest, and Silverman, 2004b). Importantly, those studies have also shown that those punctuality and attendance problems can be dramatically improved using targeted contingency management interventions. This study extends our prior research by examining the nature of the unprofessional behaviors that individuals exhibit while in the Therapeutic Workplace. First, this study examines how often various unproductive and unprofessional behaviors occur in the Therapeutic Workplace. Secondly, we determine if some of these unproductive behaviors are related to workplace productivity. Finally, we look at the incidents of severe behavior (e.g. threats or aggression), and determine whether other less severe inappropriate behaviors (e.g. loud talking, unprofessional communication) are related to these severe behaviors.

Methods

Participants

Participants (N=53) for this study included those from a clinical trial evaluating the efficacy of the Therapeutic Workplace in promoting cocaine abstinence. Participants were recruited from 16 methadone maintenance programs in Baltimore City, MD, between April 2003 and November 2003. Participants were eligible for the clinical trial if they were at least 18 years of age, were currently unemployed, enrolled in methadone maintenance treatment in Baltimore City, provided a cocaine-positive urine sample at the time of the intake interview, self-reported cocaine use, self-reported drug use through intravenous route, had visible evidence of intravenous drug use (i.e. track marks), and had at least minimal reading skills (i.e., could decode 80 percent of the words in a 56-word paragraph written at a Flesch-Kincaid reading level of 8.9). Table 1 shows the characteristics of the study participants. The Western Institutional Review Board approved the study and all participants signed informed consent (and completed a quiz regarding their consent) before participating.

General Workplace Procedures

All enrolled participants were invited to train and work in the training phase of the Therapeutic Workplace for four hours a day, five days a week from Monday through Friday. General Therapeutic Workplace procedures are described in detail in Silverman et al. (2005) and are described briefly here. In the workplace, participants could learn typing, keypad and data entry skills in a computer workroom setting. Participants were each given a cubicle in one of three workrooms. Each workroom had 12, 14 or 18 workstations. Participants could earn voucher dollars exchangeable for goods and services for their time in the workroom

and for their productivity and accuracy in the training programs. Participants could earn a base pay salary of \$8 per hour for the time they spent in the workroom. In addition, participants could earn about \$2 per hour for their work on the training programs.

Initially, participants were invited to attend the Therapeutic Workplace for a 4-week baseline period. During the baseline period, participants were required to provide urine and breath samples every Monday, Wednesday, and Friday before working for research data collection purposes. However, participants were allowed to work independent of their urinalysis results. Participants who attended at least 50% of the workdays, provided at least two cocaine-positive urine samples during the baseline period, and who were currently enrolled in methadone maintenance treatment at the end of the baseline period were invited to participate in the randomized controlled portion of the study. Those participants were randomly assigned to one of two groups, the Abstinence & Work (n=28), and the Work Only (n=28) group. Both groups were invited to continue attending the workplace for 26 more weeks. Participants in both of these groups were required to leave urine and breath samples before working on Monday, Wednesday, and Friday. Participants in the Abstinence and Work group were required to provide urine samples that showed they did not use cocaine recently. Participants in the Work Only group could continue to work regardless of their breath and urine sample results. The work hours and pay rates were the same as in the baseline period. Participants who worked 60 or more total hours were included in the data analyses for this study (n=53); three participants of the original 56 enrolled in the study did not work 60 or more hours and were excluded from this analysis. We believed that participants who worked fewer than 60 total hours were not present in the workroom long enough to get a sufficient measure of their professional demeanor. There was no difference between the total number of violations per week across the Abstinence & Work and Work Only groups, so all the data presented were collapsed across groups.

Staff

The Therapeutic Workplace had two to three Workroom Instructors working with participants on their training programs and monitoring their professional behavior. The Workroom Instructors included two to three females aged 22-30 years with Bachelor Degrees. In addition, there was one male 24-year old Workroom Supervisor with a Masters Degree. The Workroom Instructors were situated in the entrance area of the Therapeutic Workplace, just outside of the three workrooms. From this vantage, the instructors were able to hear loud noises and talking, but could not directly observe participants' behavior.

Typing and Keypad Training Programs

The typing and keypad programs were designed to teach participants to copy characters using the alphanumeric keyboard and the number pad, respectively. The programs assumed no typing or keypad skills. Both programs were divided into small steps that participants could master sequentially. At the start of the program, the steps were very simple, requiring subjects to copy only one character (“j” in the typing program and “4” in the keypad program). The steps gradually increased in complexity and difficulty by teaching progressively more characters across steps, requiring progressively faster typing speeds and allowing progressively fewer errors to master. Participants earned \$0.03 in vouchers for every 20 correct responses, lost \$0.01 for every 2 incorrect responses (except for the first 3 steps), and earned bonuses that started at \$0.25 and increased to \$1.25 for mastering steps.

In both of the programs, participants practiced the skills being taught on a step in short timings that lasted one-minute each. Within each one-minute timing, participants were repeatedly presented with sample lines of text to copy until the timing ended. Directly below each line of text was a trainee entry line, in which typed keys were displayed. After a trainee

completed a timing, a feedback screen displayed a message that indicated the number of correct and incorrect characters typed and the amount earned on that timing.

The mastery criteria for steps were specified in terms of a required number of correct characters per minute and maximum number of incorrect characters per minute. Once a trainee met the mastery criteria for a given step, the program automatically moved the trainee to the next step. To ensure that trainees did not look at the keys, keyboards always had opaque plastic keyboard covers. In addition, trainees were periodically provided with finger placement training and had to pass periodic staff-administered technique reviews to ensure that they were using the proper typing technique. Additional details of the typing and keypad training programs are provided elsewhere (Silverman et al. 2005).

Standards and Management of Professional Demeanor

Participants were instructed and expected to maintain professional behavior while in the workplace. All participants received an instruction manual that provided a detailed description of the Therapeutic Workplace's standards and management of professional demeanor. Those standards are shown in Table 2. If a trainee violated one of these rules, staff implemented one of the following administrative procedures: Corrective Feedback, or Administrative Break. There were three additional procedures used to address severe behavior incidents: Workshift Termination, Workshift Termination Plus Pay-Rate Reset, and Security Escort. Administrative procedures were implemented in three stages. All trainees began in Stage One. When a trainee violated a professional demeanor standard in Stage One, a staff member gave the trainee corrective feedback for the offense. If a trainee engaged in a particular type of violation repeatedly over days, the trainee was increased to Stage Two for that violation. In this stage, the first violation of the day received corrective feedback, and all others received a two-minute administrative break, where the trainee was signed out of the workroom and asked to leave the workplace for two minutes. If a trainee continued to repeat that violation over time, then Stage Three procedures were used for that violation. In Stage Three, the first violation of the day received corrective feedback, the second a two-minute break, the third a four-minute break, the fourth an 8-minute break, and all violations thereafter received a 16-minute break. In general, administrative breaks were designed to be short in order so as to limit disruptions in training time. Increases in break time were made only when the shorter breaks were unsuccessful.

An Administrative Procedures Card System was used to monitor violations and administrative breaks for participants in Stages Two or Three. The cards were business sized and kept in a plastic rolodex on the trainee's desk. The rolodex contained six stacks of cards, one for each professional demeanor violation. If Stage One procedures were used, all of the cards in the stack said "Corrective Feedback." For Stage Two procedures, the first card in the stack said "Corrective Feedback," but all others said "2-minute Administrative Break." For Stage 3 procedures, the first card said "Corrective Feedback," the second "2-minute Administrative Break," the third "4-minute Administrative Break," the fourth "8-minute Administrative Break," and the rest of the cards said "16-minute Administrative Break." On 3/16/2004, Stage Two and Three procedures were stopped. All trainees currently receiving those contingencies remained on them, but no participants were moved to these stages after this date. These procedures were stopped because of fear that they were discouraging workplace attendance.

Staff were required to give Corrective Feedback for all violations. They were encouraged to use specific statements when administering corrective feedback. Staff also used specific procedures when implementing administrative breaks. In addition to Stage One, Two and Three procedures, there were three special procedures that staff used for Severe Behavior Incidents. If a participant's behavior became extreme and threatening, or actually aggressive

(e.g. a participant made a threatening comment, or gestured in an aggressive manner), the staff person could terminate the trainee's work shift and send the participant home for the day. Depending on the persistence or severity of the behavior, the staff person could also reset the participant's base pay rate. Finally, if the participant did not leave the workplace immediately when requested or if his behavior appeared uncontrollable, the staff person could call the hospital security staff to remove the participant from the hospital premises. These decisions were based on the staff member's discretion.

If staff members observed a trainee violating a professional demeanor standard (e.g. gave corrective feedback) while performing their regular job duties, the staff member implemented the appropriate administrative procedures and recorded the occurrence of the professional demeanor violation. In addition, as workloads permitted, staff members checked each workroom two to four times each day. During these random checks, staff observed each participant and recorded his behavior at that time and then implemented the appropriate administrative procedures

Recording, Storing and Monitoring Professional Demeanor Behavior Data

For each professional demeanor violation, staff recorded the date, time, type of behavior monitoring (Routine or Random Check), Participant ID, type of violation, and the administrative procedure used for that violation (e.g. Corrective Feedback, 2-Minute Administrative Break). At the end of each day, the total number of violations for each professional demeanor standard was entered into each participant's individual Excel spreadsheet.

In addition to the data spreadsheet, each participant's Excel file contained a graph that displayed her professional demeanor data. This graph showed the total number of violations per day for each professional demeanor standard, the total number of administrative breaks per day, and any work shift terminations and calls to hospital security.

Trainee's professional demeanor graphs were examined at weekly staff meetings where decisions to advance a trainee to Stage Two or Three Procedures were made. This decision was made when the participant's professional demeanor data showed that violations were consistent and not decreasing over days. If Stage Two or Three procedures did not seem like an appropriate solution, then alternative solutions were discussed. For example, with the keyboard cover off violation, we placed electrical tape over each of the keys that were to be covered, to prevent the trainee from removing the covers. For some library mode violations and severe behavior incidents, we moved participant's workstations to reduce distractions or avoid conflicts.

Data Analysis

For each participant, the number of times that the participant violated each professional demeanor standard per week was calculated. Because the number of hours each participant worked varied greatly (min=69 hours, max=611 hours), the number of violations for each professional demeanor standard was divided by the time each participant spent in training. Each participant's number of violations for each standard was divided by the number of weeks they worked; a week was defined as a 20-hour period (i.e. the number of 20-hours signed into the workroom, so that 1 professional demeanor violation per week equals 1 violation per 20 hours worked in the workroom).

To examine relationships between the rates of different types of professional demeanor violations and performance on the typing and keypad training program, and between different types of professional demeanor violations and other types of professional demeanor violations, Spearman and Pearson correlation coefficients were calculated and significance

tests were conducted between selected pairs of variables that were expected to be related. Since Spearman and Pearson correlations were in fairly close agreement in terms of magnitude and statistical significance, only Spearman correlations are presented. Spearman correlations were chosen in lieu of Pearson correlations due to some skewness and to guard against the potential effects of a few outliers or influential data points. Tests were considered significant at $p \leq 0.05$.

Results

Frequency of Violations

The numbers of violations participants emitted per week for each professional demeanor standard are presented in Figure 1. The means and standard errors of means for professional demeanor violations are presented in Table 3. All but one participant had at least one professional demeanor violation. The most common violations were sleeping and library mode. Sleeping was a serious problem for a number of participants; 6 participants (11%) averaged 2 or more sleeping violations per week. Three of these participants (6%) averaged more than 6 sleeping violations per week. Nine participants (17%) averaged 2 or more library mode violations per week. About one quarter of participants had at least one vulgar language and/or professional communication violation (23% and 24% of participants, respectively). Most participants (66%) had at least one eating or drinking violation, though none averaged more than one per week. While only two participants (4%) violated the keyboard cover rule, one was problematic; she had an average of 1.5 violations per week. Participants varied considerably in the number of hours that they worked during the study period; there did not appear to be any relationship between the rate of professional demeanor violations and the number of hours worked.

Severe Behavior Incidents

Four study participants (8%) were involved in severe behavior incidents in the workplace involving yelling, cursing, arguing, and threatening statements (see Table 4). In addition, six and possibly seven participants were involved or implicated in acts of threats or aggression that allegedly occurred outside of the workplace.

Relationship Between Professional Demeanor and Training Performance

The frequency of sleeping violations was negatively correlated with hourly pay for performance on the typing and keypad training programs (Table 5, Prod Pay Per Hour), correct keystrokes entered on the typing and keypad training programs per hour worked in the workrooms (Table 5, Correct Per Hour Worked), and the highest step achieved on the typing and keypad training programs (Table 5, Highest Typing Step and Highest Keypad Step). The frequency of sleeping violations was positively correlated with incorrect keystrokes entered on the typing and keypad training programs per hour worked in the workrooms (Table 5, Incorrect Per Hour Worked) and incorrect keystrokes entered on the typing and keypad training programs per hour spent in one-minute timings (Table 5, Incorrect Per Hour of Timings). All of these correlations were significant for both the nonparametric (Spearman correlation coefficient) and the parametric (Pearson correlation coefficient) tests.

Table 5 provides limited evidence that library mode violations were negatively correlated with correct responses on the typing and keypad training program per hour worked in the workroom and positively correlated with incorrect responses per hour on the typing and keypad training programs per hour spent in actual one-minute timings, although only the Spearman correlation coefficients were statistically significant.

Interrelationships Between Violations of Pairs of Professional Demeanor Standards

As shown in Table 5, library mode violations were positively correlated with professional communication violations and vulgar language violations. Professional communication violations were also positively correlated with vulgar language violations, severe behavior incidents and total violations. Finally, vulgar language violations were correlated with severe behavior incidents and total violations.

Discussion

As a highly controlled model workplace, the Therapeutic Workplace provides a unique opportunity to observe the workplace behaviors of users of illicit drugs in a supported work environment. The overall rates of undesirable behaviors were relatively low. The Therapeutic Workplace is designed to promote desirable professional demeanor and to keep the rates of problem behaviors low. Although rates in general were low, some participants did exhibit problem behaviors. The data in this study show that some participants slept frequently at their desks, some talked loudly in a quiet work environment, and some used vulgar language or communicated unprofessionally with staff or other participants. Some of these behaviors appeared to impair participants' work performance and many of these behaviors would not be tolerated in most community workplaces.

About 10 percent of participants slept frequently at their desks, a behavior which appeared to limit their productivity and earnings in the workplace, and skill acquisition on the training programs. Sleeping was related to lower pay, decreased productivity, more mistakes, and less skill acquisition. Thus, these individuals continually slept in the workplace, despite the fact that sleeping appeared to reduce their wages, hamper their work performance and limit their skill acquisition. The reason for the high rate of sleeping in these individuals is not known. Our informal analyses failed to show any clear relationship between use of sedative drugs and sleeping. Additional formal and more thorough investigations of possible pharmacological explanations for the sleeping problems are warranted. Investigation into the nighttime sleeping patterns of participants might also be useful. Sleep disturbance appears to be a problem for many methadone-maintenance patients. In a study of methadone maintenance patients, Stein et al. (2004) found that 84% of participants met the criteria for a clinically meaningful sleep disturbance. Another study on sleep disorders of methadone-maintained patients in Israel found that 75.2% were poor sleepers (Peles et al. 2005). The reasons for this are not entirely known, though Stein et al. suggest that an interaction among sleep disturbance, psychiatric disorders, and drug dependence is likely. Future research should investigate both the causes of these sleeping problems and interventions to address the negative impact on workplace performance.

Many participants frequently talked loudly in the workrooms, despite the existence of the library mode standard in the workplace and despite repeated requests by staff to keep talking volumes down. Library mode violations were associated with reduced productivity for Spearman correlation coefficients, though not for Pearson correlation coefficients. Library mode violations may have been only weakly related to performance on the training programs because participants could converse with coworkers without leaving their computers by talking loudly across the room while still working. This may also explain the relationship between library mode and professional communication violations. Talking or yelling across the room can be distracting to some other participants, and can lead to altercations between trainees. The severe behavior incident #3 between participants 35 and 45 in Table 3 provides an example of this. There is some evidence that library mode violations were also associated with vulgar language violations. Our methods of data collection may account for some of these correlations. Library mode was almost always recorded in addition to professional communication or vulgar language. For example, if a

participant swore loudly, staff recorded violations for both library mode and vulgar language. However, professional communication and vulgar language were relatively rare behaviors, while library mode occurred more often. Thus, the co-occurrence of these behaviors cannot fully explain the association. Future research should further explore this association, particularly the possibility that library mode violations may be precursors to more serious problem behaviors.

In many professional environments, using vulgar language is not acceptable and can lead to termination. In the Therapeutic Workplace, participants were informed that vulgar language was not allowed. Yet over 20% of participants used vulgar language at some time during their participation in the Therapeutic Workplace. Additionally, almost 25% of participants communicated unprofessionally with either staff or coworkers. In addition to the relative frequency of these behaviors, they were each associated with severe behavior incidents and total violations. It is possible that professional communication and vulgar language violations were associated with severe behavior incidents because these behaviors tend to occur together. However, the relationship between each of these relatively infrequent behaviors and total violations suggest that people who engage in these types of infrequent problematic behaviors also engage in high rates of other problem behaviors. Similar inappropriate verbal behaviors have been observed in a substance abuse treatment clinic setting (Petry et al. 1998).

Four participants were involved in severe behavior incidents in the Therapeutic Workplace. These incidents involved cursing at a staff member; and arguing, yelling, threatening and cursing at a coworker. In most community workplaces, these behaviors would not be tolerated, and would be cause for immediate termination.

Addressing professional demeanor problems in a therapeutically constructive way is a difficult challenge. Most community training programs and workplaces would likely discharge or terminate a trainee or employee for engaging in these behaviors (e.g., for repeated sleeping, loud arguing, or using vulgar or threatening language). We have avoided the use of terminal contingencies (i.e., discharging trainees for violations) in the Therapeutic Workplace, because we expect that many of our participants would indeed be terminated for violating the rules, and that would thereby eliminate the opportunity to provide the therapeutic experience that could be available in our program. Instead, we have chosen a multi-faceted approach that minimizes the use of aversive consequence. We have discharged participants from the program only in rare cases in which the staff members believe that a participant threatens the safety of staff members or other participants. Our approach has focused on 1) arranging reinforcement contingencies for work behaviors (e.g., typing) to increase work productivity and to indirectly reduce sleeping and talking, 2) allowing the use of headphones and music during work and using physical partitions between participants to reduce talking and disruptive social interactions, 3) providing detailed instructions and corrective feedback for professional demeanor violations, and 4) imposing short administrative breaks for moderately severe violations.

Study Limitations

This study provides some exploratory analyses of the unprofessional behaviors of users of illicit drugs, but it does have some limitations. The data on professional demeanor was observed and recorded by staff. While staff members were trained in monitoring and recording violations of the professional demeanor rules, observer reliability was not measured across staff. It is possible that observer bias affected how violations were recorded. Although it is important to recognize this limitation, the relationships observed between sleeping (and to a lesser extent library mode violations) and the objective measures

of typing and keypad training performance provide an important validation of at least some of the professional demeanor measures.

Future Needed Research

Future research should investigate interventions to produce further increases in work productivity and to decrease critical undesirable behaviors like sleeping and frequently talking during work. Additional contingency management interventions that manipulate the schedule, frequency and type of reinforcement for desirable behaviors would be reasonable to investigate. Future research might also investigate the relative benefits and limitations of the types of terminal contingencies that are frequently used in adult job skills training programs and in community workplaces.

This study suggests that individuals with long histories of drug addiction and chronic unemployment may exhibit behaviors that could limit their abilities to succeed in community job skills training programs and to sustain employment in community workplaces. Indeed, the patterns of behaviors that we have described in this study may explain why some of these individuals fail to maintain sustained employment in community workplaces. Further research to characterize these problematic unprofessional behaviors more fully and to develop interventions to reduce them could be important in developing employment interventions that prepare similar populations of chronically unemployed adults for long-term success in the workplace.

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Glossary

Administrative Break	Participants are required to leave the workplace for a brief period of time for repeatedly violating one of the professional demeanor rules.
Base Pay	An hourly pay participants could earn for attendance. Normal base pay rate is \$8.00 per hour.
Competitive Employment	Employment in community workplaces where participants must compete to obtain the employment.
Contingency Management Interventions	Procedures in which tangible consequence are delivered to participants contingent on the emission of specified and objective target behaviors. When the contingency increases the probability of the target behavior, that consequence is called a reinforcer and the process is called reinforcement.
Corrective Feedback	Standardized statements used to inform participants of their inappropriate workplace behaviors.
Professional Demeanor	The appropriate and professional behaviors displayed by participants while in the workplace.

Reinforcer	An event that is presented after a response that increases the probability of that response (see also Contingency Management Intervention)
Reset	A temporary decrease in base pay rate to \$1.00 per hour. Base pay could be reset for missed mandatory urine samples, drug-positive urine samples, or for severe behavior incidents. Once a participant's base pay rate was reset, it could increase by \$1.00 per hour for each day the participant completed a work shift (5 minutes worked)/
Security Escort	Hospital security officer is called to escort participants from the hospital campus when their behavior is extreme, threatening, or aggressive, or if they refuse to leave on their own.
Severe Behavior Incident	Extreme, threatening, or aggressive behavior in the workplace.
Supported Employment	An employment intervention where the performance requirements are less than typical employment, participants receive on-the-job training to ensure their success on the job, and the employment opportunity is temporary.
Therapeutic Workplace	An employment-based substance abuse treatment program that uses wages earned for working to reinforce abstinence. In the Therapeutic Workplace participants are hired and paid to work, but are required to provide objective evidence of recent drug abstinence to work and earn wages. There are two phases to the treatment, a training phase designed to initiate abstinence and teach necessary job skills, and an employment phase in which participants are hired to perform real jobs. During the training phase, participants earn vouchers exchangeable for goods and services instead of cash to reduce the chance that they will use their earning to purchase drugs. During the employment phase, participants earn paychecks.
Workshift Termination	Participants are required to leave the hospital campus for the remained of the day for a severe behavior incident.
Workshift Termination Plus Pay Reset	Participants are required to leave the hospital campus for the remained of the day, and their base pay rate is temporarily reset to \$1.00 per hour for a severe behavior incident.



Figure 1.

The number of Professional Demeanor Violations per week (20 hours in the workplace, e.g. 1 professional demeanor violation per week equals 1 violation per 20 hours worked in the workroom) for each of the 53 participants. Each bar represents the data for a different participant. The numbers on the horizontal axis represent participant numbers. The asterisks indicate participants that had Severe Behavior Incidents. Participants are sorted from left to right based on their frequencies of total violations.

Table 1

Characteristics of study participants at intake.

Characteristic	All participants (n=53)
General Demographics	
Age, mean (range)	45.6 (25.5-58.0)
Male	39.6%
African-American	90.6%
Caucasian	7.5%
Years of education, mean (range)	11.5 (7.5-16)
Married	20.8%
Usual employment pattern (past 3 years), %	
Retired/disabled	7.5%
Unemployed	49.1%
Part-time	22.6%
Full-time	20.7%
Usual Occupation, %	
Clerical/sales	1.9%
Skilled manual	18.5%
Semi-skilled manual	50.9%
Unskilled	11.3%
Administrative	15.1%
Legal history (lifetime), %	
Previously arrested	86.8%
Previously convicted	77.4%
Self-reported drug use past 30 days, %	
Heroin	83.0%
Cocaine	100%
Alcohol	56.6%
DSM-IV dependent (current/lifetime), %	
Opiates	69.8% / 92.4%
Cocaine	90.6% / 90.6%
Alcohol	26.4% / 45.3%

Table 2
Standards of Professional Demeanor

Category	Definition
Sleeping	No sleeping at the workstations.
Library Mode	Keep noise level low so that someone standing 10 feet away from the trainee cannot hear them well enough to transcribe or imitate the words, sounds or noises they are saying or making.
Professional Communication	No arguing with others or talking about people or things in a negative or judgmental, or hostile manner.
Vulgar Language	No vulgar, crude, dirty, or curse words in the workplace
Eating or Drinking	No eating and drinking in the workplace; no food or drinks, open or closed, were allowed on the workstations.
Other	<u>Keyboard cover</u> . Keep a blackened plastic cover over the keyboard at all times. <u>Cell phones</u> . Do not make or receive cell-phone calls while in the workplace, and keep the ringing at a low level. Violations of these rules were recorded under Library Mode with a note.

Table 3

Means and standard errors of professional demeanor violations.

	Mean	Standard Error
<i>Professional Demeanor Violation</i>		
Sleeping per Week	0.81	0.29
Library Mode per Week	0.88	0.13
Eating or Drinking per Week	0.18	0.03
Keyboard Cover Off per Week	0.03	0.03
Vulgar Language per Week	0.03	0.01
Professional Communication per Week	0.05	0.01
Total Violations per Week	1.99	0.27
Severe Behavior Incidents	0.08	0.04

Table 4
Severe Behavior Incidents

Workplace Incidents Observed by Staff
1 Subject 37 was arguing loudly, yelling and cursing at another program participant because of the air conditioner. Subject 37 continued to yell when staff instructed her to stop.
2 Subject 44 was repeatedly talking loudly, and began using vulgar language with a staff member. As she left the workplace, the subject told the staff member to “kiss my ass.”
3 Subject 35 complained to staff that Subject 45 was being loud. When staff approached Subject 45, he stated that he knew who had “told on him.” As staff left the room, the subject broke into a verbal argument, with loud yelling and cursing. As staff was escorting Subject 35 from the room, Subject 45 walked toward her quickly, got very close to her and said, “we can take this outside.”
Alleged Threats Reported to Staff
4 Subject 42 stated that she was “going to prison” because she was feeling homicidal towards Subject 36. She claimed that Subject 36 spread the word that she had stolen \$250 while they were “getting high.”
5 Subject 43 reported to staff that another participant had threatened her with a knife over money for cigarettes. Subject 43 had been scared to come to work for a month due to the threat.
6 Subject 39 reported that two women at a bus stop approached her, and that they were looking for her to start trouble. She felt threatened by them, and believed Subject 44, who she recently had a conflict with, sent them.
7 After an argument earlier in the day (see incident 1 above), Subject 37 allegedly told the other participant that she was going to “beat her up.”

Table 5

Correlations between professional demeanor violations and performance.

	Sleeping		Library Mode		Professional Communication		Vulgar Language		Severe Behavior	
	r	p	r	p	r	p	r	p	r	p
<i>Professional Demeanor Violations</i>										
Sleeping per Week	--	--	.22	.109	--	--	--	--	--	--
Professional Communication per Week	--	--	.48	<.001	--	--	--	--	--	--
Vulgar Language per Week	--	--	.29	.034	.65	<.001	--	--	--	--
Severe Behavior Incidents	--	--	.21	.140	.58	<.001	.57	<.001	--	--
Total Violations	--	--	--	--	.48	<.001	.37	.006	.25	.074
<i>Performance Measures</i>										
Prod Pay Per Hour	-.62	<.001	-.22	.112	--	--	--	--	--	--
Correct Per Hour Worked	-.64	<.001	-.28	.044	--	--	--	--	--	--
Incorrect Per Hour Worked	.59	<.001	.00	.995	--	--	--	--	--	--
Correct per Hour of Timings	-.18	.202	.14	.320	--	--	--	--	--	--
Incorrect per Hour of Timings	.27	.049	.29	.037	--	--	--	--	--	--
Highest Typing Step	-.36	.009	.04	.761	--	--	--	--	--	--
Highest Keypad Step	-.40	.003	.10	.499	--	--	--	--	--	--