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Knowledge and Attitudes About Methadone Maintenance Among Staff Working in a Therapeutic Community

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ABSTRACT. Research demonstrates that drug treatment staff members' knowledge and attitudes about methadone are positively correlated with treatment success among opiate-dependent clients. However the bulk of this research is on outpatient treatment in methadone clinics. This study examined a residential treatment program that allowed clients on methadone, a rare treatment opportunity that is growing nationwide. Staff (N = 87) working in four therapeutic community (TC) facilities, were surveyed using the Abstinence Orientation Scale (AOS), Metha-

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done Knowledge Scale (MKS), and Disapproval of Drug Use Scale (DDU). The relationships between TC staff characteristics and scores on the assessment measures were tested for differences. Staff members who affirmed having been in treatment had greater methadone knowledge than those who had not. Staff members who participated in methadone sensitivity training had greater methadone knowledge and lower abstinence orientation than those who did not attend the training. Staff in this study had stronger abstinence orientation than found in studies of methadone clinic staff, which may represent a barrier to methadone in residential settings. This study suggests that staff experience is correlated with attitudes and knowledge about methadone and that staff training is associated with changing attitudes and knowledge about methadone. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <http://www.HaworthPress.com> © 2005 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Methadone, residential treatment, therapeutic community, opioid dependence, Abstinence Orientation Scale, Methadone Knowledge Scale, disapproval of drug use

INTRODUCTION

Heroin dependence is considered one of the most costly substance addictions due to high-risk behaviors and medical complications associated with using injection drugs, as well as costs to society (Institute of Medicine, 1995). Although there is extensive research on both residential and methadone treatments for opioid dependence, there is little research on the integration of these treatments. This study examined the relationship between therapeutic community (TC) staff knowledge and attitudes about methadone as possible barriers to incorporating methadone into residential treatment.

Models of Treatment

Drug treatment approaches can be described on a continuum ranging from "harm reduction" one end to "abstinence orientation" on the other. Harm reduction is the reduction, even to a small degree, of the harm caused by the use of drugs (Parry, 1989). This can be accomplished in many ways, from promoting the use of sterile needles to decreasing the total amount of illicit drugs being used. TC programs have historically favored an abstinence orientation, and actively discouraged use of most mood altering drugs including prescription medications. In recent years, and partly because they serve an increasing proportion of dually diagnosed patients, TCs have developed a more tolerant approach to the use of many medications. Methadone is often regarded differently because it is an opioid. Consequently, while TCs may be more accepting of most prescription medications, they may view methadone as replacing one addictive drug with another and therefore inconsistent with an abstinence philosophy. This distinction, that many prescription medications are consistent with abstinence while methadone is inconsistent with abstinence, is a key obstacle to integrating methadone treatment and TC programs. Integrating these two approaches may be of value, however, because both approaches are supported by extensive research and effectiveness data (Institute of Medicine, 1995). In practice, these two highly effective treatment approaches are rarely implemented conjointly because of differing philosophies, and such conjoint treatment may be maximally effective for some opioid users (DeLeon et al., 1995; Zweben et al., 1999).

Staff Attitudes

An obstacle to the acceptance of methadone clients into the TC is the belief that these clients are still under the influence of an illicit drug. Research indicates that staff attitudes toward certain approaches to recovery are often based on personal experience and can affect a client's treatment experience (D'Annuo & Vaughn, 1992). Specifically, staff members' personal experience with methadone and other treatments may contribute to negative attitudes about methadone treatment with clients (Humphreys, Noke & Moss, 1996). Several studies have indicated that these attitudes about methadone contribute to abstinence oriented policies toward methadone treatment, which are associated with more premature discharges from treatment, and higher relapse rates (Bell, Chen & Kuk, 1995; Caplehorn, 1994; Caplehorn, Lumley & Irwig, 1998; D'Ippoliti, Davoli, Perucci, Pasqualini & Bargagli, 1998).

Methadone Treatment

In 1965 at Rockefeller University, Dr. Vincent Dole teamed with Dr. Marie Nyswander to explore new ways of controlling addiction, and found that patients receiving a large dose (50-150 mg) of methadone exhibited no signs of withdrawal (Massing, 1998). FDA-approved for over

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30 years, methadone ameliorates opioid addiction to help clients stop their illicit drug use, avoid relapse, and make use of other therapeutic modalities. Methadone is currently the most effective treatment for heroin addiction (Institute of Medicine, 1995). Apart from its direct impact on drug addiction and relapse prevention, methadone is associated with a decrease in other dangerous drug-related behaviors including criminal activity and exposure to health risks (Ball, Lange, Myers & Friedman, 1988; Caplehorn, Irwig & Saunders, 1996). However, methadone maintenance as a treatment for opiate addiction remains controversial among some residential treatment providers, with some staff endorsing longterm maintenance (harm-reduction philosophy) and others viewing the goal as abstinence from all opioids including methadone (abstinence philosophy) (Nadelmann, McNeely & Drucker, 1997; Kang, Magura, Nwaskeze & Demsky, 1997).

Therapeutic Community

The therapeutic community (TC) connotes a historically abstinencebased treatment where positive relationships within the community serve as the tool for recovery (De Leon, 2000). The National Survey of Substance Abuse Treatment Services (2000) found that only 2.6% of residential rehabilitation facilities allow methadone or levo-alpha-acetylmethadol (LAAM). The infrequency with which TCs admit clients on methadone is indicative of an abstinence philosophy, which can foster negative attitudes about methadone treatment. Clients on methadone often feel pressured by residential staff and peers to taper¹ off methadone, which can negatively impact their relationships within the community, hindering the efficacy of TC treatment. Further, tapering off methadone is a frequent precursor to relapse in heroin addiction (Hser, Anglin & Powers, 1993). Thus clients on methadone in the TC may find themselves without the relationships to support their recovery, and may taper before they feel ready, increasing the risk of relapse.

Collaboration: Methadone and Therapeutic Community

Despite historical and philosophical differences, TCs and methadone programs have worked together. DeLeon and colleagues (1995) created collaboration between a methadone program and a day program based on modified TC method. This study found that the extensive therapeutic, social and vocational services of the TC contributed to the effectiveness of treatment for methadone clients, so that the TC day program clients showed a greater reduction in overall cocaine and heroin use, needle use, criminal activity and psychological dysfunction when compared to traditional MMT clients. Another study examined the challenges to integrating clients on methadone into residential treatment (Zweben et al., 1999). This study found that while inaccurate beliefs about respective programs and staff splitting were common problems, these obstacles could be overcome by encouraging education about respective programs and creating systems to improve collaboration and communication between different program staff. These studies suggest that integrating methadone and TC treatments is efficacious for clients, and can be accomplished with staff cooperation.

To evaluate staff knowledge and attitudes about methadone maintenance treatment, we administered several scales: the Abstinence Orientation Scale (AOS), the Methadone Knowledge Scale (MKS), and the Disapproval of Drug Use Scale (DDU). The primary aim of this study was to examine TC staff attitudes and knowledge about methadone, as they relate to staff variables such as education, personal recovery status, and methadone sensitivity training attendance.

METHOD

Setting and Sample

Staff members working in four related therapeutic community treatment facilities located in San Francisco, California were surveyed in May, 2003. The 104 staff members who had patient contact were asked to participate and 87 (84%) agreed. In the four TC facilities, methadone sensitivity training was offered bi-annually as a way to increase staff knowledge about methadone and to promote more tolerant staff attitudes toward patients' treatment with methadone while in the TC. The twohour methadone sensitivity training provided by the methadone counselor at the TC involved a presentation on the physical and psychological effects of methadone, as well as the components of methadone treatment at a clinic. During the training, each attendee completed a True/False test about the effects of methadone. Afterward, opinions were discussed, in order to address stigma about methadone treatment. The sensitivity training was recommended for all new clinical TC staff and optional for vocational, administrative, legal, intake, and external contractors.

Recruitment

Staff members were recruited for this survey either during staff meetings or while working in the facility. A Research Information Sheet was attached to the packet of questionnaires, explaining the purpose of the research and that participation was voluntary, and responses would be kept confidential. Participants were not paid for their participation.

Survey Procedure

The Institutional Review Board at University of California, San Francisco approved all study procedures. Staff members were asked to anonymously complete the measures in a private room at the TC, then to seal their responses in an unmarked envelope before returning it to the researchers. Staff members agreed to participate by completing the measures and returning them in a sealed envelope; staff refused to participate either verbally or by leaving the measures blank when returning the envelope. Each participant spent 10-20 minutes completing four measures: demographics, Abstinence Orientation Scale, Methadone Knowledge Scale, and Disapproval of Drug Use.

Measures

The demographics questionnaire captured information pertaining to staff ethnicity, gender, job function at the therapeutic community, education level, history of personal recovery including participation in methadone treatment, years working in the recovery field, and completion of methadone sensitivity training.

The Abstinence Orientation Scale (AOS) was developed to measure commitment to abstinence-oriented treatment policies (Caplehorn et al., 1996). This scale has been shown to have acceptable test-retest reliability in a study with staff in methadone maintenance clinics (Caplehorn, Lumley & Irwig, 1998). The AOS consists of 14 items, each of which is scored on a five-point Likert scale. Respondents' AOS scores are calculated by dividing the total for the scale by the number of questions answered, giving a possible range of 1-5. Thus, the higher the score, the stronger the abstinence orientation of that staff member.

The Methadone Knowledge Scale (MKS) was developed to test knowledge of the risks and benefits of using methadone. This scale was shown to have acceptable test-retest reliability with staff working in methadone maintenance clinics (Caplehorn et al., 1998). The MKS consists of 12 items, each of which is answered true or false. Respondents' scores are calculated by adding "1" for a correct answer, "0" for no answer and "-1" for an incorrect answer, giving a theoretical range of -12 to +12. Thus, higher scores indicate greater knowledge about methadone.

The Disapproval of Drug Use (DDU) Scale was developed to measure support for punishment of illicit drug use. The scale was shown to have acceptable test-retest reliability of 0.80 (Caplehorn et al., 1996). The DDU consists of 6 items, and is scored and calculated using the same Likert scale and calculations described above.

Analysis

Correlations between demographic information, such as personal history of drug treatment and attendance at methadone sensitivity training, and the three scales (AOS, MKS, DDU) were computed. The Wilcoxon two-sample rank test was used when comparing two independent groups on the three measures. We compared participants having any drug treatment history (n = 55) with those having no drug treatment history (n = 31), those having a methadone maintenance treatment history (n = 14) with those having no such history (n = 72), and those who participated in the methadone sensitivity training (n = 40) with those not participating in the training (n = 45). We used p < .025 as the alpha level for comparison of subgroups.

RESULTS

As Table 1 illustrates, the mean age of respondents was 43 years, and about half were male. The ethnic composition of the study was predominantly Caucasian and African-American. Of the 87 staff, 4 had a PhD, PsyD or MD specializing in psychiatry. Of the remainder, 70 had at least a high school diploma and 9 had substance abuse treatment certification, either a CAADAC (California Association of Alcohol and Drug Abuse Counselors) or CADAE (California Association of Drug and Alcohol Educators) certificate. About two-thirds of respondents worked in clinical positions. Respondents had worked in substance abuse treatment a mean of 6 years. Respondents had a wide range of years working in substance abuse treatment settings. Nearly three-quarters of respondents were in recovery themselves, nearly two-thirds had received some type of drug/alcohol treatment, and less than a quarter had received metha-

TABLE 1. Background Characteristics of Participants (N = 87)

	Years	n
Mean Years of Age (Range)	43 (22-69)	83
Mean Years of Education (Range)	14 (10-20)	69
Mean Years Working in Substance Abuse Treatment (Range)	6 (0-28)	55
	%	n
Gender		
Women	53	44
Ethnicity		
White/Caucasian	43	36
African-American	39	32
Other	11	9
Latino/Hispanic	6	5
Asian-American/Pacific Islander	1	1
Type of Work at Therapeutic Community		
Clinical	67	56
Administrative	33	27
In Recovery	74	64
Have Received Alcohol/Drug Treatment	64	55
Have Received Methadone Maintenance	16	14
Attended Methadone Sensitivity Training	47	40

done treatment. Nearly half of respondents had attended a methadone sensitivity training.

As Table 2 illustrates, staff members who reported having a personal history of alcohol/drug treatment (including methadone) displayed a significantly higher methadone knowledge score than those who had not been in treatment. However, their abstinence orientation scores were not different, reflecting a strong orientation toward a strict abstinence philosophy among all staff members. Staff who had been prescribed methadone in their lifetimes had significantly higher methadone knowledge scores versus those who had never been treated with methadone maintenance. However, their abstinence orientation scores were not significantly different from staff who had not been prescribed methadone.

There were statistically significant differences on both Abstinence Orientation and Methadone Knowledge scales related to attendance at methadone sensitivity training. Those respondents who had attended TABLE 2. Knowledge and Attitudes About Methadone

	Personal Alcohol/Drug Treatment		
	Yes n = 31	No n = 55	p-value
Abstinence Orientation	3.23	3.19	.8359
Methadone Knowledge	3.67	0.32	.0137**
Disapproval of Drug Use	2.90	2.77	.5484
·	Methadone Maintenance		
	Yes n = 14	No n = 72	p-value
Abstinence Orientation	2.89	3.28	.0387
Methadone Knowledge	5.71	1.83	.0198**
Disapproval of Drug Use	2.69	2.89	.1987
	Attended Methado Sensitivity Traini		
	Yes n = 40	No n = 45	p-value
Abstinence Orientation	2.95	3.42	.0017**
Methadone Knowledge	4.95	0.31	.0004**

**statistically significant differences

methadone sensitivity training had significantly higher methadone knowledge scores than those who had not attended the training. Staff who attended methadone sensitivity training also had significantly lower abstinence orientation scores than those who had not, reflecting less rigid endorsement of an abstinence-oriented philosophy. No other significant differences were found.

DISCUSSION

This study examined staff knowledge and attitudes about methadone as possible barriers to incorporating methadone into the TC. Staff members' personal experiences with drug treatment were significantly related to their knowledge and attitudes about treatment. Staff with personal drug/alcohol treatment experience knew significantly more about methadone than those without. Previous methadone treatment was positively correlated with knowledge about methadone and those who had received methadone treatment had significantly more knowledge about the medication. Attendance at a methadone sensitivity training was associated with lower scores of abstinence orientation and greater knowledge about methadone.

The finding that staff who have been in treatment know more about methadone is similar to that found by Caplehorn, Hartel and Irwig. (1997). The finding that those who had been in alcohol/drug treatment were significantly more knowledgeable about methadone suggests that participation in treatment may increase knowledge of methadone as a treatment.

Caplehorn et al. (1997) found that New York methadone clinic staff in recovery had higher AOS scores than staff not in recovery, indicating less positive attitudes about methadone. This finding was not replicated in this study. This difference between the studies may be due to a cultural difference in attitudes toward recovery between geographical locations such as New York and San Francisco, or to differences reflecting the two treatment modalities.

In a study of New York methadone clinics, staff received a mean AOS score of 2.65 (Caplehorn et al., 1997), significantly lower than what this study found (M = 3.22). A similar study of Australian methadone clinic staff revealed a mean AOS score of 2.95, also reflecting more positive attitudes about methadone treatment (Caplehorn et al., 1996). Future research with a larger sample of programs could help us to understand the degree to which TCs and methadone programs differ in their attitudes, and future educational efforts could explore whether these opinions are malleable. New York methadone clinic staff that had taken methadone received lower AOS scores than those who had not (Caplehorn et al., 1997), suggesting more positive attitudes about methadone treatment. The current study revealed the same trend among staff who had been on methadone, as well as among those who attended a methadone sensitivity training.

Caplehorn et al. (1996) found a mean disapproval of drug use score of 2.65 among Australian methadone clinic staff, comparable to our mean of 2.85. Other studies have used a 5-item DDU so their results cannot be compared to ours (Caplehorn et al., 1997; Gerlach & Caplehorn, 1999).

The study of New York methadone clinic staff revealed a mean methadone knowledge score of 5.1 on a scale of a possible -12 to +12(Caplehorn et al., 1997). This score is comparable to our finding with staff members who attended a methadone sensitivity training (m = 4.95), suggesting that the TC training provided similar information to what is provided in the methadone clinics studied. Doctors in Germany who prescribe methadone scored 6 on a scale of a possible 10 (with a modified MKS), a finding that reflected an understanding of the social benefits of methadone, but a lack of knowledge about the direct physical effects of methadone on their patients (Gerlach & Caplehorn, 1999).

Attendance at a methadone sensitivity training was associated with lower scores of abstinence orientation. Thus staff who attended the training were less likely to have negative attitudes about the use of legal opioids such as methadone. Attendance was also associated with greater knowledge about methadone. While it is likely that those with less negative attitudes and more knowledge of methadone were more open to attending such a training, the results also suggest that attendance in such a group could possibly have benefits both in terms of increasing knowledge and decreasing negative attitudes about methadone treatment. Future research could determine whether methadone sensitivity training actually moderates this abstinence orientation and increases knowledge about methadone.

Several factors that were examined did not yield the results expected. While previous research suggested a correlation between greater years of education and support of medication such as methadone in addiction treatment (Forman et al., 2001), this study did not find a correlation between education and attitudes about methadone. Further, while previous research suggests that years working in the substance abuse treatment field is positively correlated with greater support of medication utilization in treatment settings (Forman, Bovasso & Woody, 2001), we did not find a correlation between years of work experience and support of methadone treatment. Ethnicity, gender, history of personal recovery, and job description were also not associated with responses on any of the three measures.

Personal experience with drug/alcohol treatment or methadone was related to significantly higher Methadone Knowledge scores, but not to differences in Abstinence Orientation scores. This suggests that being in treatment may increase understanding of methadone, but not acceptance of it. Methadone sensitivity training was associated with lower Abstinence Orientation scores and higher Methadone Knowledge scores. These results suggest that methadone sensitivity may increase understanding and acceptance of methadone as a treatment for opiate dependence. Overall this study contributes to the understanding of staff attitudes as possible barriers to incorporating methadone in treatment.

There are several limitations to this study that could be addressed in future research. With only a single sample of one therapeutic community organization, generalizability to other programs is uncertain. Further, the study was not longitudinal so cause cannot be inferred. Further research could better determine a correlation between direct exposure to methadone information and knowledge about methadone. Further research could also examine different types of treatment programs to extend these results, as well as possible causal relationships by conducting a controlled study. Future research should examine the three measures over time to determine the efficiency of methadone sensitivity training in modifying attitudes among staff. Finally, this study asked if staff had been on methadone maintenance, but did not ask about methadone detoxification or tapering. More precise and detailed questions on the demographics questionnaire might provide further information that this study did not capture.

CONCLUSIONS

Having a drug/alcohol treatment history (including methadone treatment) was associated with higher methadone knowledge but not with lower abstinence orientation. Participation in sensitivity training was associated with both higher methadone knowledge and lower abstinence orientation. Although it requires further longitudinal research, these cross sectional data suggest that sensitivity training may be a tool to address moderate abstinence orientation among clinic staff and this would enable incorporation of methadone into TC settings-which may offer the most effective approach for some opioid users.

NOTE

1. Tapering is the gradual decreasing of dose until the client is no longer taking the medication at all.

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