Substance abuse and personality disorders in homeless drop-in center clients: symptom severity and psychotherapy retention in a randomized clinical trial

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Abstract

This study evaluated the psychiatric symptoms, psychosocial problems, and treatment response of personality-disordered substance abusers receiving services within a homeless drop-in center. Fifty-two homeless clients were assessed after program admission and randomly assigned to receive either individual psychotherapy focused on personality disorder and substance abuse relapse prevention (dual-focus schema therapy [DFST]) or standard group substance abuse counseling (SAC). Client functioning was assessed using measures of personality disorder, psychiatric symptoms, early maladaptive schemas, interpersonal problems, and addiction-related psychosocial impairment. Therapy retention (total weeks in treatment) and utilization (number of weeks in which sessions were attended) were the primary outcomes. Although rates of cluster B personality disorders were comparable to other substance dependent samples, clusters A and C disorders were disproportionately more common. Clients reported significant psychiatric symptoms, criminality, and psychosocial impairment, yet made limited lifetime use of mental health services. Overall, there was greater utilization of individual DFST than group SAC. However, clients with more severe personality disorder symptoms demonstrated better utilization of SAC than DFST.
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1. Introduction

The estimated prevalence of the Axis I disorders in homeless persons ranges between 50% and 75%, with 20% to 35% having severe mental illness; 30% to 60%, alcohol abuse; 10% to 40%, drug abuse; and 10% to 20%, dual diagnoses [1-5]. In contrast, very few assessment or intervention studies have focused attention on the Axis II personality disorders, although significant psychopathology is often described in homeless samples [3]. Several studies of antisocial personality disorder (ASPD) have estimated rates between 10% and 40% [6-13], and this prevalence exceeds all Axis I disorders except substance abuse. Very few studies have systematically diagnosed the full range of Axis II disorders, although unstructured clinical assessments yield estimated rates between 20% and 70% [1,14-16] with schizoid, dependent, borderline, and antisocial features often described [14,17-19].

The limited attention to personality disorders in homeless studies is unfortunate considering the fact that the full range of Axis II disorders (not just antisocial) is highly comorbid with Axis I disorders commonly seen in this population. Across studies involving different samples, settings, and methods of assessment, more than half of treated substance abusers have at least one personality disorder, and the majority has more than one such disorder [20]. Clinically, the persistent and pervasive deficits in social, emotional, cognitive, perceptual, motivational, identity, and impulse control functioning that define personality disorder would seem to provide a common description of the impairment observed across heterogeneous homeless populations. These deficits combined with affective and behavioral dysregulation would understandably impede the effective use of psychotherapeutic and case management services and the ability to maintain stable housing and employment [21].

Homeless adults in general make poor use of the mental health and addiction service systems [22]. Several National

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Institutes of Health initiatives have focused on substance abuse or dually diagnosed homeless populations and have intervened through assertive community outreach, case management, short-term therapeutic communities, day treatment, and other integrated service delivery models [23-25]. Across the 15 interventions (most comparing usual vs higher intensity case management services) provided in the National Institute on Alcohol Abuse and Alcoholism Cooperative Agreement Program for homeless substance abusers, the major finding was that the initial treatment engagement and retention problems of substance abusers are even more pervasive and severe among homeless persons [26]. The provision of housing contributed to increased retention, but these gains were offset when higher intensity service expectations were added. However, others have found that adding more intensive services improved the outcome [27,28].

One alternative to high-intensity services would be to offer lower demand psychotherapeutic contact on-site that specifically targets the personality, substance abuse, and social adjustment problems experienced by homeless persons. In collaboration with the developer of schema therapy [29], the first author has developed dual-focus schema therapy (DFST) [30-33] to treat the interrelated symptoms of personality disorder and substance abuse. Early maladaptive schemas are very broad pervasive themes that are learned early in life, perpetuated in adulthood, and appear to describe the life circumstances of many homeless persons. Homelessness by definition reflects a profound sense of disconnection from one's family, friends, and community with an associated loss of safety, comfort, control, privacy, and trauma [34]. Abuse, assault, and deprivation are common experiences in the lives of the homeless [35]. The event of losing the security of one's home combined with sudden losses (disrupted social bonds, unemployment), family abuse/violence, and subsequent deprivations and assaults are common in shelter or street life [36]. In addition, research suggests that the early histories of the chronically homeless are often characterized by abuse, loss, isolation, deprivation, and instability [21]. As children, homeless adults have higher rates of foster care, group home placement, neglect, sexual and physical abuse, less effective kin supports, drug use, runaway behaviors, poverty, residential instability, family violence, and parental psychopathology than do psychiatric patients without histories of homelessness [8,21,35,37-39]. Descriptions of homeless persons as rootless, isolated, lacking personal resources and family support, perpetrators and victims of crime, psychologically traumatized, and difficult to treat have obvious parallels with descriptions of persons with severe personality disorders.

This study hypothesized that personality disorder and substance abuse may define a substantial group of overlooked, poorly understood, and inadequately studied and served dual diagnosis clients within the homeless service system. We describe the personality, social, and psychiatric impairment seen in a group of homeless clients who participated in a randomized clinical trial comparing 2 psychotherapies. We predicted that homeless clients with personality disorder and substance abuse would identify schemas especially related to themes of disconnection/rejection (mistrust/abuse, abandonment/instability, defectiveness/shame, emotional deprivation, social isolation) and would report significant psychiatric symptoms and interpersonal problems. We predicted that an innovative individual psychotherapy (DFST) that specifically targets both substance abuse and personality disorder symptoms would result in better outcomes (retention in homeless services program, reduced symptoms, and improved psychosocial functioning) than the standard substance abuse counseling (SAC) group offered within a homeless drop-in center. We also predicted that the superiority of DFST over SAC would be especially evident for clients with more severe personality and psychiatric problems because of its enhanced individualized focus on these issues as well as substance abuse.

2. Method

2.1. Participants

All participants were homeless adults seeking services at the Neighborhood Center for Homeless People (NHCP), a drop-in center program of the Neighborhood Coalition for Shelter, Inc, located in the upper east side of Manhattan. The study sample was predominantly men (94%) and African American (49%, 26% Hispanic, 23% white) with an average age of 38.3 (SD = 10.4, range = 19-57) years. The majority of participants had never married (58%), and only 4% were currently married (6% widowed, 33% separated or divorced). Most participants (67%) had a high school education, and 45% had some technical training or education. Only 26% reported being essentially unemployed for the prior 3 years (49% reported some period of full-time or regular part-time work). Most reported some support through city welfare, social security, or family. The longest full-time job averaged 3.8 (SD = 4.2) years, split almost equally between skilled and semiskilled/unskilled employment categories.

Inclusion criteria for the study were at least 18 years old, alcohol or drug use in the past 30 days, diagnosis of personality disorder, ability to read and comprehend consents and assessments, and willingness to be a research participant (ie, randomization, audiotaping, urinalysis, and attendance at treatment and research assessment and follow-up appointments). Exclusion criteria were severe mental illness (acute schizophrenia, bipolar disorder, or organic syndrome), acute violence or suicidality, or pending incarceration. Inclusion and exclusion criteria were assessed by a series of interviewer questions. When the research coordinator suspected severe mental illness, organicity, or risk, an on-site consulting psychiatrist provided an evaluation. In addition, because we were interested in comparing the specific effectiveness of 2 different psychotherapies, clients

could not be actively participating in counseling at another substance abuse or mental health clinic while in the active treatment phase of the study. Six participants were receiving methadone but were meeting with an outside counselor only for monitoring purposes. Participation in this institutional review board–approved study was completely voluntary and did not affect entrance to or termination from other NHCP services, although drop-in center discharge resulted in termination of study treatments.

2.2. Measures

2.2.1. Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition substance use disorders

The Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*) (SCID) [40] assesses *DSM-IV* psychiatric diagnoses, and this study only assessed the substance use disorders. This section of the SCID was modified so that all abuse and dependence criteria were asked for both lifetime and current (past month) time frames. In the interest of time, participants were evaluated for criteria only for one primary substance of use.

2.2.2. Personality Diagnostic Questionnaire—Fourth Edition Revised

Personality Diagnostic Questionnaire—Fourth Edition Revised (PDQ-4R) [41] is a 100-item measure that each participant first completed as a self-report inventory. If a sufficient number of symptoms were endorsed for a potential diagnosis, then the research coordinator asked a series of questions to evaluate the chronicity (ie, symptoms present for most of life and onset before 18), pervasive maladaptivity (ie, impairment in one or more areas of life functioning), independence (ie, from acute circumstances or medical, substance, or psychiatric disorders), and distress of each diagnostic group of symptoms. Because of a major computer malfunction, the personality disorder profiles of 16 of the participants could not be recovered.

2.2.3. Addiction Severity Index

Addiction Severity Index (ASI) [42] is a structured interview that assesses addiction-related impairment in 7 areas of functioning: (1) medical, (2) employment, (3) alcohol, (4) drug, (5) family/social, (6) legal, and (7) psychological. The reliability and validity of this measure in treated substance abusers have been well documented and support its use with homeless substance abusers [43]. Because of the primary presenting concern of this sample (ie, homelessness), we created an 8-item section on housing using a format consistent with the other ASI sections.

2.2.4. Brief Symptom Inventory

The Brief Symptom Inventory (BSI) [44] is a 53-item self-report inventory of psychiatric symptoms using a 5-point rating scale of distress. It yields 3 global severity measures and 9 primary symptom dimensions: anxiety, depression, hostility, interpersonal sensitivity, obsessive-compulsive, paranoia, phobic anxiety, psychoticism, and somatization.

2.2.5. Inventory of Interpersonal Problems—Circumplex

Inventory of Interpersonal Problems (IIP)—Circumplex [45] is a 64-item self-report that measures types of interpersonal problems in the past 30 days on a 5-point Likert scale of distress: domineering, vindictive, intrusive, cold, socially avoidant, exploitable, nonassertive, and overly nurturant.

2.2.6. Early Maladaptive Schema Questionnaire

The Early Maladaptive Schema Questionnaire-Research (EMSQ-R) [33] is a 75-item self-report 4-point Likert scale that measures 15 early maladaptive schemas: (*a*) emotional deprivation, (*b*) abandonment/instability, (*c*) mistrust/abuse, (*d*) social isolation, (*e*) defectiveness/shame, (*f*) failure to achieve, (*g*) dependence/incompetence, (*h*) vulnerability to harm, (*i*) enmeshment, (*j*) subjugation, (*k*) self-sacrifice, (*l*) emotional inhibition, (*m*) unrelenting standards, (*n*) entitlement, and (*o*) insufficient limits. There is support for the reliability and validity of this instrument [31].

2.3. Procedures

2.3.1. Screening, enrollment, and follow-up assessment

The NHCP drop-in center provides a range of basic services (food, clothing, hygiene, case management, counseling, vocational services, referrals, temporary shelter, and psychiatric evaluation) to approximately 800 individuals annually. During the period of study recruitment, clients were provided an information sheet upon intake that invited them to consider participation in a research study providing psychotherapy and incentives for completing research assessments. The on-site research coordinator contacted interested clients and provided additional information and eligibility screening after obtaining consent for such purposes. Screening included questions about recent substance use as well as completion of the self-report section of PDQ-4R. Clients who did not report substance use or personality disorder symptoms were ineligible, were thanked for their time, and given US$10. During the 18 months of recruitment, 318 new admissions (255 men, 63 women) indicated interest in participating in research. Of these, 22% (33 men, 37 women) were not approached because they dropped out (14%) or clinical staff considered them too psychiatrically impaired or unstable to be eligible or give proper consent (8%). The remaining 78% provided an initial consent to be screened for eligibility criteria and were given a brief explanation of the study. Of these, 79% (155 men, 40 women) either dropped out before completing the treatment consent or baseline assessment process (44%) or they were deemed ineligible usually because of denying recent substance use (35%).

This yielded a final sample of 52 (49 men; 3 women) who provided informed consent, completed the baseline assessments (self-reports, interviews, and urine tests), and began study treatments. Participants received a US$30 gift certificate for the approximately 3 hours involved in baseline assessments. Each month, an attempt was made to reassess all participants with the BSI, 10-panel urine drug screen, and a monthly version of the ASI. Participants were given US$10 for each monthly assessment that lasted approximately 30 minutes. At termination and 3-month follow-up, the full assessment battery was readministered, and another US$30 gift certificate was provided. Successful follow-up in the sample proved to be extraordinarily difficult to achieve.

2.3.2. Treatment conditions

After completion of baseline assessments, subjects were randomly assigned to 1 of 2 study treatments: (1) DFST or (2) SAC. Both treatment interventions were delivered by licensed masters-level clinicians working at NHCP who had many years of experience working with residentially unstable, substance abuse clients. Both treatments were offered for 24 weeks as an adjunct to standard case management services.

2.3.2.1. Dual-focus schema therapy. As described in greater detail in Ball [30,31], DFST is a 24-week manual-guided individual therapy consisting of a set of core topics that integrates symptom-focused relapse prevention coping skills techniques for interpersonal, affective, and craving experiences [46] and schema-focused techniques for early maladaptive schemas and coping styles [29]. An initial psychoeducational stage is focused on the identification of current life problems and patterns, initiation of abstinence, establishing a strong therapeutic alliance, and developing a detailed case conceptualization that guides a technically eclectic, but theoretically integrated series of cognitive, experiential, behavioral, and relational change strategies [29]. Dual-focus schema therapy was delivered as a weekly individual therapy and was introduced into this service setting as a novel experimental intervention for personality-disordered substance abusers. The therapist delivering this treatment received 2 separate 5-day trainings (beginner and advanced) with the developer of schema therapy (Young), at whose New York center he also worked as a part-time therapist. This therapist received weekly DFST supervision from the first author that incorporated review of audiotapes (once per month in person and thrice per month by phone).

2.3.2.2. Substance abuse counseling. The SAC condition was a group counseling program provided at the drop-in center for clients with identified substance abuse problems. It typically involved a total of 3 opportunities each week for group psychoeducation or counseling at different times of the day to facilitate greater exposure within the program. These groups were based on a curriculum developed by the

therapist through his years of experience running a large addiction and dual diagnosis program in NYC and emphasized a disease concept of addiction, the development of responsibility for one's recovery, and establishing a recovery support system. The topics provided included the disease concept, early sobriety issues, self-esteem, living with a chronic illness, assertiveness, problem solving, losses caused by addiction, denial, feelings, self-evaluation, high-risk situations, addictive defense mechanisms, and addiction-related attitudes, beliefs, behaviors, and justifications.

2.4. Data analysis

Descriptive statistics were used to characterize the personality disorder, substance use, psychiatric symptoms, interpersonal problems, schemas, and psychosocial impairment. Because several descriptive indicators had very skewed distributions, medians are presented in addition to means. In terms of outcomes, we analyzed whether there were retention differences between the 2 treatment conditions as a function of several severity indicators (ie, attribute × treatment interactions) using a backward elimination regression approach. The severity indicators included (1) personality disorder symptoms (total score on PDQ-4R), (2) psychiatric symptoms (global severity index on BSI), (3) interpersonal problems (sum of IIP symptoms), and (4) substance abuse/dependence symptoms (SCID symptom counts for substance of choice).

3. Results

3.1. Substance abuse problems

Half of the sample identified alcohol (50%), and half identified illicit drugs (cocaine 23%, heroin 14%, and marijuana 14%) as their primary substance of choice. For those who identified alcohol, 85% met lifetime criteria for alcohol dependence (12% for lifetime abuse without dependence), and 27% met criteria for current dependence (4% for current abuse without dependence). For those who identified illicit drugs, 73% (46% cocaine, 23% heroin, and 4% marijuana) met lifetime criteria for drug dependence (8% for lifetime abuse without dependence), and 42% met criteria for current dependence (12% for current abuse without dependence).

Participants reported an average age of diagnosis onset for alcohol abuse of 23.5 (SD = 7.8, median = 22) and drug abuse of 21.0 (SD = 5.8, median 19). The average number of substances used in the past month was 1.6 (SD = .9, median = 1), and lifetime polysubstance use averaged 2.9 substances (SD = 1.6, median = 3). Many participants had received prior alcohol (48%) or drug (61%) abuse treatment and had successful periods of abstinence with the longest being an average of 26.0 months (SD = 49.3, median = 12). Their most recent period of abstinence ended several months ago (mean = 39.5 months, SD = 121.3, median = 4). Almost half (40%) of the participants

reported experiencing significant alcohol or drug problems in the prior month.

3.2. Psychological problems

Cluster A personality disorders were frequently diagnosed (88% had at least one diagnosis), and paranoid personality disorder was the most common (74%). Schizotypal (56%) and schizoid (42%) also were disproportionately more common than in typical substance abuse treatment samples. Cluster B disorders were more in the range of what is typically found in drug-dependent samples (74% had at least one diagnosis), with borderline (51%) and antisocial (47%) being somewhat more common than narcissistic (35%) and histrionic (23%). Within cluster C (85% had at least one diagnosis), avoidant (63%) and especially obsessive-compulsive (61%) personality disorder were disproportionately higher than found in most substance abuse treatment samples, whereas dependent (12%) was more within the usual range.

On the EMSQ-R, the early maladaptive schemas identified most to least commonly were self-sacrifice, social isolation, unrelenting standards, entitlement, emotional inhibition, mistrust/abuse, defectiveness/shame, insufficient limits, abandonment/instability, vulnerability to harm, and emotional deprivation, failure to achieve, subjugation, dependence/incompetence, and enmeshment. On the IIP, the interpersonal problems endorsed from highest to lowest frequency were cold, overly nurturant, social avoidance, exploitativeness, vindictive, nonassertive, intrusiveness, and domineering (see Table 1).

On the ASI psychological section, participants reported experiencing significant lifetime problems with depression (87%), anxiety (81%), and cognition (64%) (attention, concentration, and memory) that were not a direct result of substance use. More than half of the sample was troubled by these symptoms (mean = 12.0 days) in the month before beginning the study (58% reported depression, 70% anxiety, and 44% cognitive symptoms). A smaller group of individuals reported having experienced hallucinations (19% lifetime and 10% in the past month). In addition, a substantial minority of participants reported significant problems with violence (33% lifetime and 12% in the past month), suicidal ideation (37% lifetime and 15% in the past month), and suicide attempts (27% lifetime and 6% in the past month). On the BSI, the psychiatric symptoms endorsed from highest to lowest frequency were paranoia, depression, obsessive-compulsive, psychotic ideation, anxiety, interpersonal sensitivity, phobic anxiety, hostility, and somatization (see Table 1). Over half (56%) reported no prior psychological/psychiatric treatment contact, and only 35% reported ever being prescribed a psychiatric medication.

3.3. Social problems

On the ASI housing section, 23% had spent some amount of time living in a controlled or confined environment (2%

Table 1
Subscale scores for psychiatric, interpersonal, and schema measures

	Mean (SD)
BSI	
Anxiety	1.29 (0.88)
Depression	1.46 (1.09)
Hostility	0.89 (0.80)
Interpersonal sensitivity	1.24 (1.03)
Obsessive-compulsive	1.39 (0.97)
Paranoia	1.48 (0.97)
Phobic anxiety	0.93 (0.90)
Psychotic ideation	1.29 (1.01)
Somatization	0.82 (0.85)
IIP	
Cold	1.58 (0.94)
Domineering	1.00 (0.72)
Exploitative	1.31 (0.76)
Intrusiveness	1.06 (0.76)
Nonassertive	1.26 (0.99)
Overly nurturant	1.42 (0.81)
Socially avoidant	1.35 (0.85)
Vindictiveness	1.30 (0.68)
EMSQ-R	
Abandonment/instability	1.41 (0.54)
Defectiveness/shame	1.48 (0.53)
Dependence/incompetence	1.07 (0.59)
Emotional deprivation	1.30 (0.53)
Emotional inhibition	1.57 (0.46)
Enmeshment	0.71 (0.47)
Entitlement	1.58 (0.56)
Failure to achieve	1.24 (0.63)
Insufficient limits	1.42 (0.50)
Mistrust/abuse	1.53 (0.50)
Self-sacrifice	1.74 (0.37)
Social isolation	1.67 (0.69)
Subjugation	1.12 (0.48)
Unrelenting standards	1.61 (0.53)
Vulnerability to harm	1.32 (0.59)

BSI indicates Brief Symptom Inventory; IIP, Inventory of Interpersonal Problems; EMSQ-R, Early Maladaptive Schema Questionnaire–Research version.

jail, 10% detoxification, 4% medical hospital, and 8% psychiatric hospital) in the past month. Over the past 3 years, 27% reported having no period of stable living arrangements, 46% reported some period of living with family, friends, or partners, 21% reported living alone, and 6% spent most of these 3 years in prison. No client reported having spent the prior month totally without some form of inside shelter. Only 26% reported having spent some amount of time sleeping outdoors in the prior month.

On the ASI legal section, participants reported extensive criminal histories, averaging 9.8 arrests (SD = 12.3, median = 4) and 4.2 convictions (SD = 7.0, median = 2) with only 17% reporting no prior arrests. Furthermore, 44% reported histories of violent crime (robbery, assault, arson, manslaughter, or rape or other sexual assault). Over half (60%) of the participants reported histories of incarceration with a lifetime average of 43.5 (SD = 75.3, median = 6) months in prison. Nonetheless, relatively few participants

reported current legal problems (only 4% referred by criminal justice or awaiting charges/trial).

On the ASI family/social section, more than half (54%) of the participants reported not living with family, friends, or significant others over most of the past 3 years. Most participants reported significant periods of serious problems with their nuclear family (50%) or a partner/spouse (63%) over their lifetime. Forty-two percent of the sample endorsed a question about lifetime physical abuse, and 21% reported sexual abuse. The rates of family history of psychopathology were reported as quite high. Substance abuse (75%) and other psychiatric disorders (44%) were especially high in one or both parents as well as in siblings (57% substance and 28% psychiatric) and grandparents (46% substance and 14% psychiatric).

3.4. Response to psychotherapy

There were no significant baseline differences and no differences in serious adverse events (defined as hospitalization for medical, psychiatric, or substance dependence; suicidality; and violence) reported between the 2 study conditions. The success of our follow-up assessments was severely compromised by the inability to locate participants who prematurely stopped coming for treatment appointments and drop-in center services. Overall, 60% (n = 31) dropped out of the treatment by the end of the first month and were extraordinarily difficult to locate. Only 12 of 52 participants completed either therapy termination or 3-month follow-up assessments and at least one monthly assessment. For the retention analyses, we considered 2 measures: (1) total sessions attended and (2) weeks with at least one session. Because a participant assigned to the SAC condition was encouraged to attend all 3 sessions per week, whereas a DFST participant could only attend 1 session per week, the utilization should have been higher in the SAC condition. This would be true both for "total sessions" (72 possible for SAC and 24 possible for DFST) and "weeks" because participants could miss a group and have additional opportunities to attend. Nonetheless, independent samples t tests indicated that the trend was in the opposite direction of greater utilization of DFST. Although this was not significant for "total sessions" (DFST: mean = 7.31, SD = 6.86, median = 6 vs SAC: mean = 6.11, SD = 6.53, median = 2), there was a marginally significant effect for "weeks" (DFST: mean = 6.12, SD = 5.92, median = 4 vs SAC: 3.81, SD = 3.82, median = 22), $t(51) = -1.69$, $P < .098$. This finding of superior utilization of DFST over SAC was statistically significant in the regression analyses reported next.

We analyzed whether there were retention differences between the 2 treatment conditions as a function of several severity indicators using a backward elimination regression approach to test attribute × treatment interactions. Of these, only the total Axis II symptoms interacted significantly with the treatment conditions, F(2,36) = 5.00, $P < .004$. There was a significant main effect for treatment condition (DFST > SAC) on treatment utilization ($\beta = 1.46$, $t = 3.11$, $P < .004$) and a treatment × Axis II symptoms interaction ($\beta = -1.31$, $t = -2.78$, $P < .007$). Further slope analyses indicated that the regression effect was significant for DFST ($\beta = -.53$, $t = -2.43$, $P < .028$), but not for SAC. Greater Axis II severity predicted worse retention in DFST, but not in SAC.

For a more detailed analysis of Axis II symptoms, we then recalculated separate cluster A, B, and C symptoms scores and repeated the regression approach above. Although there were no main or interaction effects for cluster B severity, clusters A [F(2,26) = 6.41, $P < .004$] and C [F(3,35) = 5.09, $P < .008$] severities were associated with treatment interaction differences for treatment utilization. In addition to the treatment condition main effect favoring DFST over SAC for treatment utilization ($\beta = 1.42$, $t = 3.57$, $P < .001$), there were treatment × Axis II symptoms interactions for both Axis II clusters A ($\beta = -1.29$, $t = -3.23$, $P < .003$) and C ($\beta = -.98$, $t = -2.55$, $P < .015$) symptoms. Further slope analyses for cluster A indicated a significant regression effect for SAC ($\beta = .59$, $t = 3.30$, $P < .004$), but not for DFST. Greater cluster A severity predicted better treatment utilization in SAC, but not in DFST. Slope analyses for cluster C indicated a significant regression effect for DFST ($\beta = -.64$, $t = -3.21$, $P < .006$), but not for SAC. Greater cluster C severity predicted worse treatment utilization of DFST, but not of SAC.

4. Discussion

Our selected sample reported significant lifetime and current problems with alcohol abuse and dependence, and the most commonly abused drugs were opiates, cocaine, and marijuana. The rates of antisocial, borderline, avoidant, and dependent personality disorder were similar to what is found in inpatient drug-dependent samples [20]. However, the rates of cluster A (paranoid, schizoid, and schizotypal) and obsessive-compulsive personality disorder from cluster C were approximately 10 times higher than what is typically found in treatment–seeking substance abuse samples [20]. A contributing factor to this relates to our inclusion criteria of at least one personality disorder and a current substance problem. This is compounded by the fact that, when substance abuse clients meet diagnosis for 1 personality disorder, they often meet criteria for 3 or more [20]. Thus, the sample rates reported here are not meant to represent estimates of diagnostic prevalence in a homeless population. In addition, the PDQ-4R has been criticized for its over-diagnosis of personality disorders [41,47]. However, these criticisms usually center on the self-report version of the scale, whereas we queried these screening items to establish persistence, pervasiveness, maladaptivity, and independence from situational or psychiatric conditions. In addition, the fact that the antisocial, borderline, avoidant, and dependent rates were similar to prevalence rates in treatment-seeking substance abusers argues against a hypothesis of inflation in

cluster A and obsessive-compulsive personality disorder solely on account of our sampling or assessment strategies.

Our rates of antisocial personality disorder were similar to what has been found in previous studies [4,6-13]. Although some cases of antisocial personality disorder could be a secondary consequence of maladaptive or survival-oriented behaviors related to homelessness such as those in other studies [12,48], our findings did not support a belief that homelessness causes antisocial personality disorder. High rates of prior arrests, evidence of violent crime, and lengthy periods of incarceration were more indicative of long-term patterns of deviance [12,22,48,49].

This was the first published study using structured assessments to provide data on cluster A personality disorders in homeless substance abusers. Some of the paranoid, hostile, and bizarre symptoms of the homeless may be adaptive or at least understandable given the extreme challenges of living on the streets or in a shelter [3]. Although a diagnosis of personality disorder requires evidence of early onset of maladaptive traits, we were unable to completely rule out the possibility that some cluster A disorders (especially paranoid and schizoid) may be better understood as a consequence than a cause of homelessness.

We had predicted that early maladaptive schemas in the disconnection/rejection domain would be especially prominent in a sample whose lives seemed characterized by themes of abandonment/instability, mistrust/abuse, emotional deprivation, social isolation, and defectiveness/shame. Of these 5 schemas, only social isolation was among the more commonly endorsed. Two of the more elevated schemas (self-sacrifice and unrelenting standards) were not predicted and did not seem consistent with a stereotype of a homeless, antisocial, substance-abusing person. Further research on the correlates of these 2 scales would be useful. Interpersonal problems were noted in the areas of being cold, exploitative, socially avoidant, and vindictive. In addition, problems with being overly nurturant seemed to contradict stereotypes.

Our rates of physical and sexual abuse were somewhat lower than the 50% to 90% reported in the literature, although most of these studies have focused on homeless women and families [35,38,50-52]. Our lower rates may reflect a predominantly male sample whose high levels of paranoia and antisociality made them unwilling to disclose personal details that might heighten their vulnerability in an initial research interview providing an only cursory assessment of these experiences. Our rates of suicidal ideation and attempts were similar to previous findings [13,22,35,38] but may have been somewhat lower because we excluded clients based on their acute risk to self or others.

Many participants had extended periods of abstinence from drugs and alcohol and made at least adequate use of the addiction treatment system. However, this sample's lifetime use of mental health resources was extremely limited despite their high rates of psychiatric distress and desire for psychological services. Depression, paranoia, anxiety, obsessive-compulsive symptoms, violent behavior, suicidal ideation, and traumatic and other painful life experiences were very common, but less than half reported ever having mental health contact. In addition, more than half were estranged from family members (who themselves had very high rates of substance abuse and psychiatric disorders), and the half that still had some family connection reported significant conflicts. Thus, most of our sample were disconnected from the formal treatment and informal kin supports often necessary to sustain recovery. It seems reasonable to assume that the common presence of cluster A personality disorders defined by paranoid, guarded, detached, withdrawn, and bizarre characteristics might contribute to this disconnection or reluctance to rely on others for help.

Dual-focus schema therapy has been developed as a time-limited, manual-guided individual therapy and is being evaluated in several randomized clinical trials [31]. The current study extends this work to a new population in a new setting and is one of the first studies to compare treatments for individuals with high rates of cluster A personality disorders. We predicted that therapeutic attention to the symptoms of personality disorder provided by DFST would reduce behaviors such as relapse and symptoms of depression, anxiety, and interpersonal problems that heighten the risk for dropout from homeless services. Unfortunately, our very low retention rates were highly consistent with other randomized treatment comparison studies [24,26] and compromised our ability to evaluate symptom outcomes. We predicted that those receiving DFST would be more likely to remain in treatment. We did find that clients overall utilized DFST better than SAC, and this effect was rendered even more noteworthy because the opportunity to attend DFST sessions was much more limited (1 scheduled appointment per week) than SAC (multiple group offerings). However, we found no evidence supporting the differential retention of DFST over SAC for participants with greater personality pathology. In fact, attribute × treatment interactions suggested that the reverse was true.

This study has a number of limitations. By far, the most significant problem was that study attrition prevented our evaluation of outcomes other than retention and utilization. We had anticipated that this would be a problem but underestimated how difficult it was to track down clients in a large urban area who left this drop-in center. In addition, the relatively small sample size and selected disorders (personality-disordered substance abusers without psychosis) and other characteristics (men using a drop-in center on the upper east side of Manhattan) prohibit generalizing these findings to other homeless samples such as women with children or those using nonurban, residentially based, or hospital-connected services [3]. The results also may not accurately represent the general client population of this drop-in center given that only 16% of those expressing interest in research were randomized to therapy (48% dropped out before consent and 36% were ineligible because of either severe instability or denial of recent substance use).

Another potential limitation was our decision to compare DFST to a standard reference group counseling (SAC) that was not altered for study design purposes. This resulted in some areas of difference (individual vs group modality, session frequency, and therapy supervision) and overlap (relapse prevention and psychoeducation). In addition, using only one therapist for each condition raises the risk that general or idiosyncratic therapist effects might be operating. Thus, any of these important differences between the conditions may be accounting for the outcomes more than the specific content or interventions of the treatment. Nonetheless, this study does not provide clear support for the value of only adding relatively low-intensity therapies into a homeless drop-in center. This low level of psychosocial enhancement is insufficient to enhance retention and utilization much less impact on the broad array of psychological and socioeconomic problems facing homeless persons. A series of studies by Milby et al [27,53,54] and Schumacher et al [28] have found that a day treatment model for homeless cocaine abusers is more effective (retention and drug use outcomes) than standard care especially when combined with abstinence-contingent housing and work therapy. Whether targeted psychotherapy (such as DFST) or pharmacotherapy for personality disorders in homeless substance abuse clients would enhance these outcomes requires further study.

A more conceptual limitation of this clinical research was its exclusive focus on the individual psychopathology of the client [55,56]. We do not mean to ignore, underestimate, or oversimplify major socioeconomic contributing factors or suggest that an individual's personality disorder is the cause of homelessness. On the other hand, research, community, and clinical initiatives cannot continue to overlook these significant personality problems out of some perhaps well-intentioned desire to avoid further blaming or stigmatizing severely vulnerable people. A personality disorder is not a matter of bad character, but rather a serious psychiatric condition defined by maladaptation to social environments and failures in social role function. This description would seem to capture a broader group of homeless individuals than does any other psychiatric disorder. The metadiagnostic category of "serious and persistently mental ill" has been an understandably dominant concern in health services research [56]. Individuals with substance dependence and personality disorders usually meet the definitional requirements of "disability" and "duration," but they are typically not included in this severely ill category unless they have schizophrenia or a major affective disorder. With the possible exception of severe borderline personality disorder, definitions of dual diagnosis exclude the personality disorders [2], although the prevalence of personality disorders far exceeds the prevalence of other "serious and persistent mental illness" among substance abusers. Although homeless persons with schizophrenia and substance abuse clearly deserve attention as a highly vulnerable group, an equally and perhaps more in need (given higher prevalence) of services (given limited access and use) are clients with severe personality disorders. This need for greater services, however, is complicated by the fact that these dually diagnosed persons often do not acknowledge their disorder or need for help. When they do access services, their maladaptive behaviors are often associated with poor attendance, failure to follow through on referrals, noncompliance with medications for medical or psychiatric symptoms, and suicidal behaviors. Their interpersonal behaviors often antagonize and reduce the effectiveness of the medical, mental health, vocational, and case management personnel trying to help. Although it remains unclear whether this group of patients is amenable to psychotherapy, they are in profound need of other social services, and some may benefit from counseling or pharmacotherapy to help improve adaptive functioning or reduce Axis I symptoms. Much more research is needed on this overlooked group of homeless persons.

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