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Motivation and Readiness for Drug Treatment: Differences by Modality and Special Populations

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Abstract

The purpose of this research is to expand our knowledge of motivational factors among admissions to various substance abuse treatment modalities and among those entering special programs. Differences in motivation are reported in a convenience sample of over 6000 admissions to 38 programs. Results from multilevel analyses show (1) an ordered increase in motivation by settings from referral to out patient, to methadone maintenance, to highest levels in residential programs; (2) significantly lower motivation among admissions to programs for special populations. Results are discussed in relation to the demand characteristics of treatment and *non-recovery* reasons for entering treatment.

Keywords

Substance Abuse Treatment; Motivation; Drug Use; Recovery; Treatment Modalities

INTRODUCTION

The general objective of the present study is to expand our knowledge of motivational factors among admissions to various substance abuse treatment modalities and among those entering special programs. Several decades of research have established the importance of motivation in substance abuse treatment populations. Although review of this considerable literature is beyond the scope of the present paper, the research has generated conclusions that establish the relevance of motivational factors to treatment seeking, engagement, retention and outcomes.^{1,2,3,4,5}

Despite the evidence documenting the role of motivation and readiness in substance abuse treatment, there has been no focus on clarifying motivational differences between admissions to particular treatment modalities. The importance of this focus is underscored in

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the extensive evaluations of the effectiveness of the main community based substance abuse treatment programs.

A large plurality of treatment seekers (in the USA) are served by 3 major modalities, long term residential drug free programs (LTR), outpatient drug free (DFO) and methadone maintenance treatment (MMT) programs. The federally funded multi-program surveys conducted over some 40 years such as Drug Abuse Reporting Program (DARP), Treatment Outcome Prospective Study (TOPS), National Treatment Improvement Study (NTIES) and the Drug Abuse Treatment Outcome Study (DATOS) consistently conclude that the 3 major modalities are similarly effective in terms of improved outcomes (e.g., reductions in drug use and anti-social behaviors⁶). However, these surveys also document that each of the modalities serves a different client profile particularly with respect to the severity of drug use and related problems.^{7,8} Thus, illuminating additional client profile factors such as motivation and readiness would improve our understanding of the comparative effectiveness and cost effectiveness of the major drug treatment modalities. In particular, clarification of motivational differences across modalities could guide the refinement of client-treatment matching strategies.

Similarly, more needs to be known about motivational factors among substance abusers entering the increasing number of programs serving special populations, such as those in the criminal justice system and substance abusers with co-occurring mental disorders. Evidence from samples in residential programs suggests that these clients exhibit lower levels of motivation and readiness for treatment compared to clients in the main community-based treatment programs, e.g. those in prison based programs.^{9,10} and those in special programs for co-occurring disorders.^{11,12} Notwithstanding their comparatively lower baseline motivation, however, score levels within these special populations positively predict longer retention or engagement in treatment.⁴

Though important, these studies have been limited to samples in residential Therapeutic Community (TC) programs modified for special populations. Research is needed on motivational levels across a wider range of special populations entering special programs in non-residential settings as well as residential TCs. Such information can guide program modification efforts to improve retention as well as outcomes in these populations.

Rationale for the Present Study

The present research provides a unique opportunity to directly compare motivational levels on samples of clients entering various treatment modalities and special programs utilizing a common instrument, i.e., Circumstances, Motivation, Readiness and Suitability scales.¹³ Study comparisons in the existing literature are often obscured by differences in the measures used to assess motivation. However, three studies involving different treatment modalities and motivation are relevant to the present research. Two of these investigations utilized data from the DATOS that included measures of motivation and readiness derived from the items of the CMRS. Joe and associates^{2,3} conclude that indicators of intrinsic motivation especially readiness for treatment were not only significant predictors of engagement and retention in each modality but were more important than socio-demographic, drug use and other background variables. Hser et.al.¹⁴ report significant

motivational differences between first time and repeated admissions to each DATOS modality; those with lengthy prior treatment histories (i.e. treatment experienced patient), expressed greater recognition of having drug problems, desire for help, and readiness for treatment.

While these DATOS studies underscored that motivational factors are important *within* each modality, levels of motivation or readiness *across* modalities were not a comparative focus. In the study by Joe and associates direct multimodality comparisons of motivations were not reported. The study by Hser and associates does display mean scores on the DATOS motivational scales for first time and repeated admissions in each modality. However, no statistical comparisons are reported on modality differences in these motivational scores.

Finally, a third, earlier study¹⁵ administered the long version of the original CMRS to compare scores in various different treatment settings. Results based on small samples showed significant differences in overall motivational levels across settings. These findings are examined further in the discussion section of this paper.

Utilizing a large convenience sample (N>6,500) the present research directly compared motivational levels among substance abuse treatment populations entering different modalities and special programs. The approach analyzed data derived from multiple studies all of which included the CMRS or a shorter CMR version to assess motivation and readiness for treatment. The selected studies were conducted between 1996–1999. A total of 16 studies were included comprising of 38 participating programs, encompassing residential, drug-free outpatient, and outpatient methadone modalities, a referral center and programs for special populations (e.g., women, COD, homeless and prison inmates). Multilevel analyses assessed differences in motivation across settings and special populations.

METHOD

Procedures

Researchers and programs throughout the country that had previously used the CMRS were contacted and asked to contribute their data when they had completed their own studies. There were no refusals, although some projects had not completed their own analyses by the end of the grant period and were not included in the study. All datasets included the complete study sample from research studies that used standard protocols for interviewing clients at admission to treatment. Data was collected via face-to-face interviews by trained interviewers or program staff, standard research protocols that included IRB approvals, obtaining informed consent, voluntary participation, and adherence to rigorous data collection procedures.

Study Sample

There were specific criteria for inclusion in the present study: 1) The dataset had to have CMRS items sufficient for calculating the M and R scales based on the shortened 18-item version of the instrument, the Circumstances, Motivation and Readiness (CMR) instrument, 2) The dataset contained at least minimal sample descriptors (i.e., age, gender, race/ethnicity, primary drug, legal status), 3) The CMRS had to be administered in a manner that

guarded against hidden selection biases (i.e., consecutive admissions or some similar non-biasing selection procedure was used). 4) The treatment modality also had to be specified and data from different programs offered by the same agency had to have program identifiers. 5) Datasets involving treatment populations (i.e. those other than the referral center) had to include a specified planned duration of treatment and at least one dependent variable, such as retention, treatment involvement, or a treatment outcome measure, such as abstinence. However, these additional variables were not a focus of the present analyses. 6) The program served adult substance users, >18 years. 7) The specific study collected enough CMRS items to calculate the M-R.

The current analysis used only data from programs that had at least 30 clients with Motivation and Readiness scores on the 18-item CMR scale. Because there was only one detoxification program and it had a small sample size, it was also excluded. The resulting study sample included data on 6,523 adults who participated in 16 studies. There were 38 program samples ranging from 30 to 1,458 clients with an average of $N=230$ ($sd=361$). The sample contained 2,354 women (36.1%) and 4,169 men (63.9%). Their ages ranged from 16 to 80 years old (Mean=31.91, $sd=8.37$). The majority were African American (3,459 or 53.0%), 1,771 (27.2%) were Caucasian, 1,124 (17.2%) were Hispanic, and 140 (2.1%) were other race-ethnicities. The most frequently reported primary drug was cocaine/crack (2,782 or 42.7%), then opiates (1,432 or 22.0%), followed by alcohol (642 or 9.8%), marijuana (469 or 7.2%) and other drugs (348 or 5.3%). Six hundred and fifty-five (5.3%) reported polydrug use at admission to treatment

Measurement

Program level descriptors include average motivation and readiness for treatment, treatment modality, and the type of client population (e.g., specialized programs for prisoners, women, co-occurring substance use and mental disorder, or adult programs with no special admission requirements).

Demographic Characteristics—Standardized categorical measures describe the client's characteristics gender (female, male), age (under 24 years, 25–34, 35–44, 45 years and older), race-ethnicity (African-American, Hispanic vs. Caucasian), the primary drug reported at admission (alcohol, cocaine, crack, marijuana, opiates, other drugs and poly drugs), and whether the client was legally mandated to treatment (mandated vs. voluntary admission).

Motivation and Readiness for Treatment—The current study uses the Motivation and Readiness Scales from the 18-item Circumstances, Motivation and Readiness (CMR) instrument (see Appendix A) to measure motivation (the desire to quit drugs) and readiness for treatment (the acceptance of the need for treatment as a means of quitting drugs). Though developed initially in TC settings, the Motivation and Readiness (MR) scale assesses general measures of motivation for treatment and is applicable to multiple treatment modalities.

The MR score is the additive sum of the 12 items (five motivation items and seven readiness items) from the CMR questionnaire (see Appendix A). Potential scores for the combined

motivation-readiness score range from 0 to 60 with a high score indicating greater motivation and readiness for treatment. Psychometric analyses indicated that high concurrent validity between the 18-item and 42-item CMRS scales.¹⁶ The correlation coefficients were .93 for the total scores and .88 for the Motivation-Readiness scores. Cronbach's alpha coefficients demonstrated moderate to high levels of internal consistency of the M and R subscales Cronbach's alpha coefficients ranging from .79 to .93 across modalities and from .82 to .93 across programs serving the different client populations. The average MR ranged from 43.33 to 53.65 across the 38 programs.

Modality—The modality variable contrasts residential TCs to all other treatment modalities. In this sample, all the residential programs were therapeutic communities (N=22) with planned durations of stay from less than six months to more than one year. Non-residential modalities represented in the sample included a referral center (N=1), drug-free outpatient programs (N=8) and methadone maintenance programs (N=7). Drug-free outpatient programs in the sample typically required clients to attend two to three counseling sessions per week, did not utilize medication management, and served clients who resided in the general community. The methadone maintenance programs exclusively treated opiate users living in the general community, who received daily methadone doses at the program. The referral center did not provide treatment directly to the clients, but referred them mainly to drug-free outpatient programs. The sample consisted of 3,796 (58.2%) clients in residential TCs, 964 clients (14.8%) in drug-free outpatient programs, 948 (14.5%) in methadone maintenance programs and 815 (12.5%) in the referral center.

Type of Clientele Served—Programs were grouped by whether the program specialized in serving a specific client population. There were 25 programs serving a general or “standard” population and 13 serving specific populations, (e.g., women [N=5], clients with co-occurring substance use and mental disorders [N=2], homeless [N=4], or criminal justice-involved clients [N=2]). These programs are designed to meet the needs of the special populations that they serve and therefore represent modifications of the substance abuse treatment approaches. Most clients (4,104 or 62.9%) were in programs that served the general population (non special clients) and 2,419 (37.1%) were in programs that were specifically designed for a specialized populations.

Data Analysis

One-way analysis of variance techniques with Scheffé post-hoc tests where appropriate were used to examine average differences MR across client and program characteristics. Multilevel modeling was conducted in SPSS to examine modality differences in MR. The first step in the multilevel analysis was to estimate the null model, a model without any predictors, to assess whether programs differ from each other in MR. Next, the model was estimated including modality and type of clientele served as level 2 fixed effects. Because the purpose of this analysis is to examine levels of MR by modality, the multilevel analysis controlled for client demographic and drug use characteristics that are often associated with statistically significant differences in MR: age at admission to treatment, gender, ethnicity, primary drug of abuse, and whether the client was legally mandated to treatment. We did not have a standardized measure of severity of drug use across datasets, so primary drug of

abuse is used as an imperfect proxy for severity. Restricted maximum likelihood estimation.^{17,18} Finally, the model was extended to test for an interaction effect between modality and type of clientele.

RESULTS

Table 1 summarizes the observed average motivation and readiness scores across client characteristics. The average MR was 49.12 (sd=8.12) out of a possible 60 points. There were statistically significant differences by client characteristics. Higher scores were observed for women compared to men ($p=.047$) and minorities compared to Caucasians ($p<.001$). Scheffé post-hoc tests indicated that clients who were less than 24 years old at admission had significantly lower MR scores than other age groups ($p<.011$). Similarly, there is an ordered decrease in motivational scores by primary drug (cocaine, opiates, crack, polydrug, other drug, marijuana, alcohol); those who reported cocaine as their primary drug had significantly higher average MR scores compared to those who reported alcohol or marijuana as their primary drug scores. ($p<.001$) Finally, the average MR score was significantly lower for clients who were mandated to treatment compared to voluntary admissions. ($p<.001$)

Program Differences

The null model produced an intercept of 49.62 (the average program MR score) and an estimated variance of the random components was 4.97 which was statistically different from zero (Wald $Z= 3.77$, $p <.001$), leading to the rejection of the null hypothesis. The interclass correlation coefficient (ICC) indicates that 8% of the variance in MR is accounted for by differences across programs. Thus, the majority of the variance in MR is explained by client-level differences. However, program level factors do account for some variance in MR.

Table 2 summarizes the findings for the multilevel model examining modality and type of clientele served, controlling for age, gender, race/ethnicity, and primary drug reported at admission. The intercept means that on average clients scored 52.06 on the MR. The estimated variance of the random components is 1.63 and statistically different from zero (Wald $Z=2.75$, $p<.001$), indicating that the model improves the prediction of MR. The estimate of the effect of being in a referral program is -6.48 , $t(18) = -4.70$, $p<.001$, indicating that being in a referral program is associated with almost a six and a half point reduction in MR compared to being in a residential TC. Similarly, being in a drug-free outpatient program is related to a four point reduction in MR (-4.10 , $t(30) = -6.03$, $p<.001$) and a two point reduction for clients in methadone maintenance programs (-2.35 , $t(30) = -3.27$, $p<.001$).

Admissions to programs for specialized clientele had an average of over two points lower MR scores than those admitted to “standard” programs (-2.18 , $t(31) = -3.79$, $p<.001$). Except for homeless clients, each of the special population subgroups (COD, women, criminal justice) yielded lower M-R compared to the “standard” population (not shown). Because data on whether the client was mandated to treatment was not available for the referral program, a separate analysis was conducted with this information for all programs

except the referral programs (not shown). The pattern of findings and significance remained consistent when controlling for whether the client was legally mandated to treatment.

Figure 1 graphically depicts these differences by comparing average MR scores for programs categorized by both modality and for special populations. The f test is the modality difference including standard and special programs for the entire sample. ($F=9.51$, $df=5$, $p<.001$). Separate tests for the standard and special programs were also significant, $p=.000$ respectively. There is an orderly relationship between modality and motivational scores ranging from the lowest levels in the referral center, elevating in drug free outpatient programs, increasing further in methadone programs to highest levels in the residential TC programs. Although the special programs motivation scores are lower on average than the “standard” population, the residential-non-residential difference in motivation scores remains evident.

DISCUSSION

Motivational measures are reported in a convenience sample of over 6,500 admissions to 38 programs including a referral center, residential TCs, drug-free outpatient, and methadone maintenance treatment and special programs for special populations including women, homeless, prisoners and those with co-occurring substance use and mental disorders. Bivariate analyses yielded motivational differences by demography, primary drug and legal status. Significantly higher motivation was associated with females, non whites, older individuals, primary cocaine users and voluntary clients. With the exception of gender, these demographic and primary drug results are consistent with those reported in studies utilizing the CMR derived scales.⁴

The focus on this study was on modality and special population differences. Multilevel analyses controlling for client variables showed significantly higher levels of motivation for admissions to residential TCs and methadone maintenance programs compared to drug-free outpatient programs and the referral center. Significantly lower levels of motivation were obtained among the admissions to programs for special populations, although the residential-non residential differences persist. (Figure1).

Two interrelated hypotheses are set forth to explain the differences in motivation obtained in this study. The first, underscores different *motivational thresholds* for entering modalities with different treatment demands. According to this proposition, the lower scores among the referral center and the drug free outpatient and samples reflect their lower demand characteristics compared to the methadone and residential samples. The referral center makes the least demand on clients requiring only that they complete an admissions interview and enter the recommended modality (which many do not) while drug free outpatient treatment clinics generally require the commitment of an evening or two per week. Methadone maintenance programs require daily trips to the treatment agency while residential TCs require sacrificing living free in the community and adjusting to the 24/7 participatory expectations of the program for many months. Thus higher levels of motivation are needed to overcome resistances to enter or stay in treatments with higher levels of demand. (Note 1):

The second hypothesis addresses differences obtained between the special and “standard” populations of substance abusers and emphasizes the role of *non-recovery* reasons for entering treatment. Accordingly, the lower motivation among clients in programs designed for special populations compared to those in “standard” programs may be the consequence of needs in addition to, or not directly related to substance abuse. For example, the lower motivation among clients with COD may reflect the prominence of their psychological disorders relative to their substance abuse problem. Therefore, many of these clients may consider treatment for substance abuse as secondary to treatment for their psychiatric condition. Similarly, prisoners may perceive a treatment environment to be more safe or desirable than the units for the general inmate population, or to avoid being moved to another facility located further from their family.

Special programs for women offer services for various women’s problems or needs in addition to their substance abuse which may lower their resistance to enter these programs compared to standard treatment programs that focus more on the drug problems. This is supported in the results of an additional analysis showing that the women in “standard” residential TCs have significantly higher motivation than the women in the special residential programs ($M=51.01$, $sd.7.553$ vs. $M=47.26$, $sd.6.418$; $f=161.884$, $p<000$).

The homeless substance abusers in this study were all in residential TC programs. Their motivational scores are comparable to standard populations. This suggests that for these homeless substance abusers access to a residential setting while important, is not the main reason for electing TC treatment for their drug problems. Thus, special populations enter drug treatment for various reasons other than, or in addition to, their drug problems which is reflected in their M-R scores.

These two hypotheses are not necessarily independent. Both imply that substance abuse and non substance abuse problems may differentially contribute to motivational levels and modality preference. However, it is the perceived severity of substance use as a problem, as measured on the MR scale, that defines the motivational threshold for entering higher treatment demand settings such as MMT and residential TCs. This is illustrated in the data of the (Figure 1). The orderly relationship between motivational levels and modality suggests a gradient of treatment demand and perceived severity of drug problems in both the standard and special populations.

The hypothesized relations involving modality, motivation and problem severity gain support in other analyses in the present data as well in the data of other studies. For example, with primary drug as a proxy for severity the results showed higher motivational scores for cocaine users compared with lower motivation scores among primary alcohol and marijuana users (Table 1). Moreover, significantly higher proportions of cocaine users were in residential settings compared to other settings while significantly higher proportions of primary alcohol and marijuana users were in outpatient settings (not shown).

¹The concept of treatment demand as proposed in this paper refers to requirements or expectations for participation) and differs from treatment intensity which refers. to parameters such as frequency dosage or magnitude.

Studies in the literature report positive correlations between motivation and various indices of drug severity, such as frequency, duration and magnitude patterns of drug use, or history of drug treatment.^{4,14,19} and with non-drug indices of problem severity.²⁰ Finally, as noted in the introduction, a relationship between severity of client profile (indices of drug use and other problems) and treatment modality has been demonstrated in DATOS; the most severe clients enter long term residential treatment compared to severity profiles of admissions to drug free outpatient treatment.^{7,8} Nevertheless, additional research is needed to specifically isolate the relative importance of substance abuse and non-substance abuse problems as the motivational reasons for electing particular treatment modalities.

Limitations

The convenience sample in this research introduced limitations that bear upon the generality and relevance of the study findings. First, a possible procedural limitation concerns the use of incorporated data from 16 different studies. Despite inclusion criteria that guarded against collection bias, there may be unidentified differences within the baseline data collections. In this regard, there is no evidence of a systematic data collection error biasing modality or special population programs. Some confidence in this assumption lies in the standard deviations of the 38 program means (not shown). These were of modest magnitudes, consistent across the program sample, and similar to M-R distributions in the literature.

Second, a study sample using a common instrument for measuring motivation may be unique rather than a representative sample of programs or substance abusers entering the various modalities. It should be reiterated, however, that the common instrument of motivation was a rationale for undertaking the present study. Its implementation minimized instrument variance that typically has obscured comparative research in the literature on motivation.

By definition, a convenience sample is not necessarily a representative sample. However, the 38 treatment programs in this study were mainly publically funded as are the majority of programs in the major modalities in the drug treatment system; and though not rigorously assessed, the present study sample does not appear to differ in client profiles, nor do the treatment formats differ from programs described in multi-modality surveys (e.g. DATOS). An obvious limitation, however, is the absence of various private, fees for service residential and outpatient programs as well as hospital based programs.

A third limitation of the present study concerns the timeliness of the data. The time frame of data collection ended in 1999 which cautions inferences to contemporary modalities and special programs., (Note 2). However, the authors are not aware of more recent research on modality differences utilizing a common instrument of motivation. In this regard, the present findings can be compared with the 2 earlier studies of substance abusers with similar profiles that contained data on modality differences with measures derived from the CMRS. In the "Pit Step" study report by Lipton, Morales and Goldsmith¹⁵ motivational scores increase systematically across settings, lowest among a street sample of drug abusers, rising

²One study a long term residential TC collected data prior to 1990. Re-analysis of the present data without this sample yielded a similar pattern of findings.

in outpatient treatment, further in a detoxification clinic then to highest levels in MMT and Residential TC treatment. Similarly, in the DATOS multi-modality survey (data collected 1991–1993), the present investigators (GDL and GM) re-analyzed the motivation scales derived from the CMRS instrument. Results also revealed significantly lower motivational scores in the drug free outpatient modality compared to those in long term residential and methadone maintenance treatment. (Note 3) Thus, the M-R results from the few existing studies are consistent with the present findings demonstrating that clients entering various modalities differ in overall levels of motivation.

Implications

Notwithstanding its limitations the present research contains clinical and research implications. For example, the findings inform the general issue of matching clients to treatment. Matching strategies must assess client overall level of motivation and readiness to enter or remain in any treatment as well as their treatment preference. In particular, the differential contribution of perceived severity of drug problems and non-substance abuse problems to overall motivation should be assessed to guide selection of an appropriate treatment modality. Notably, clients in the referral center have the lowest and most variable motivation scores (sds. are twice that of the other modalities). The efficacy of referral centers in particular and the referral process in general can be improved through sophisticated assessment of client problem severity, motivation, readiness and their preference for treatment modality or setting.

Finally, the recent years have witnessed changes in substance user profiles, patterns of drug use, treatment alternatives, as well decreased planned duration of treatment particularly for residential TC programs. Though obtained on an earlier generation of substance users the findings provide a firm empirical basis for more comprehensive comparative studies of contemporary program and population differences in motivation.

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³Data can be requested from the authors.

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APPENDIX A

CTCR

CENTER FOR THERAPEUTIC COMMUNITY RESEARCH

CIRCUMSTANCES, MOTIVATION, and READINESS SCALES for SUBSTANCE ABUSE TREATMENT

CMR FACTOR SCALES

Intake Version

CLIENT ID NUMBER..... (_ / _ / _ / _ / _ / _ / _ / _) ⁽¹⁻⁸⁾

CLIENT GENDER..... (_) ⁽⁹⁾

1=Male 2=Female

CLIENT ETHNICITY..... (_) ⁽¹⁰⁾

1=African American 2=Hispanic 3=White 4=Other

CLIENT AGE..... (_ / _) ⁽¹¹⁻¹²⁾

PRIMARY DRUG..... (_ / _) ⁽¹³⁻¹⁴⁾

1=Non-crack cocaine

5=Alcohol

2=Crack

6=Poly Drug

3=Opiates

8=Other

4=Marijuana

TREATMENT MODALITY..... (_ / _) ⁽¹⁵⁻¹⁶⁾

1= Drug Free Outpatient

7= No Treatment Entered

2= Day Treatment

8= Detoxification Only

3= Methadone Maintenance

9= Detoxification as Entry into Treatment

4= Brief Residential (0-3 months)

10= Hospital Inpatient

5= Short Term Residential (4 to 6 months)

11= Referral Center

6= Long Term Residential (More than 6 months)

12= Other

DATE OF ADMINISTRATION..... (/ / / / /) ^(17,22)

FOR CTCR USE ONLY. PLEASE LEAVE BLANK.

INSTRUMENT VERSION..... () ⁽²³⁾

PROGRAM NUMBER..... (/) ^(24,25)

October 26, 1998 Revision

How you feel can have a powerful effect on treatment. These feelings include your circumstances, the problems in your life, your feelings about yourself, and your feelings about treatment. Carefully consider each of the questions below and indicate how closely they describe your own thoughts and feelings.

Circle the number that best describes your response.

	1	2	3	4	5	9
	Strongly	Disagree	Neither	Agree	Strongly	Not
	Disagree		Agree or Disagree		Agree	Applicable
1.	<i>I am sure that I would go to jail if I didn't enter treatment.</i>				1----2----3----4----5----9 ____ ^(xxvi)	
2.	<i>I am sure that I would have come to treatment without the pressure of my legal involvement.</i>				1----2----3----4----5----9 ____ ^(xxvii)	
3.	<i>I am sure that my family will not let me live at home if I did not come to treatment.</i>				1----2----3----4----5----9 ____ ^(xxviii)	
4.	<i>I believe that my family/relationship will try to make me leave treatment after a few months.</i>				1----2----3----4----5----9 ____ ^(xxix)	
5.	<i>I am worried that I will have serious money problems if I stay in treatment.</i>				1----2----3----4----5----9 ____ ^(xxx)	
6.	<i>Basically, I feel I have too many outside problems that will prevent me from completing treatment (parents, spouse/relationship, children, loss of job, loss of income, loss of education, family problems, loss of home/place to live, etc.).</i>				1----2----3----4----5----9 ____ ^(xxxi)	
7.	<i>Basically, I feel that my drug use is a very serious problem in my life.</i>				1----2----3----4----5----9 ____ ^(xxxii)	

8. *Often I don't like myself because of my drug use.* 1----2----3----4----5----9 ____^(xxxiii)
9. *Lately, I feel if I don't change, my life will keep getting worse.* 1----2----3----4----5----9 ____^(xxxiv)
10. *I really feel bad that my drug use and the way I've been living has hurt a lot of people.* 1----2----3----4----5----9 ____^(xxxv)
11. *It is more important to me than anything else that I stop using drugs.* 1----2----3----4----5----9 ____^(xxxvi)

- | | 1
Strongly
Disagree | 2
Disagree | 3
Neither
Agree or Disagree | 4
Agree | 5
Strongly
Agree | 9
Not
Applicable |
|-----|--|-----------------------------|--|--------------------------|---|---|
| 12. | <i>I don't really believe that I have to be in treatment to stop using drugs, I can stop anytime I want.</i> | | | | 1---2---3---4---5---9 | ____(^{xcvii}) |
| 13. | <i>I came to this program because I really feel that I'm ready to deal with myself in treatment.</i> | | | | 1---2---3---4---5---9 | ____(^{xcviii}) |
| 14. | <i>I'll do whatever I have to do to get my life straightened out.</i> | | | | 1---2---3---4---5---9 | ____(^{xcix}) |
| 15. | <i>Basically, I don't see any other choice for help at this time except some kind of treatment.</i> | | | | 1---2---3---4---5---9 | ____(^{xl}) |
| 16. | <i>I don't really think I can stop my drug use with the help of friends, family or religion, I really need some kind of treatment.</i> | | | | 1---2---3---4---5---9 | ____(^{xli}) |
| 17. | <i>I am really tired of using drugs and want to change, but I know I can't do it on my own.</i> | | | | 1---2---3---4---5---9 | ____(^{xlii}) |
| 18. | <i>I'm willing to enter treatment as soon as possible.</i> | | | | 1---2---3---4---5---9 | ____(^{xliii}) |

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Figure 1.
Average Program Motivation-Readiness Scores by Program Type (N=38)

Table 1
Average Motivation and Readiness for Treatment by Client Characteristics (N=6,523)

	N	Avg. Motivation & Readiness	Sd	95% CI	F	Sig.
TOTAL SAMPLE	6,523	49.12	8.12	(48.93 – 49.32)		
Gender						
Female	2,354	49.39	7.32	(49.09 – 49.68)	3.94	.047
Male	4,169	48.90	8.53	(48.71 – 49.23)		
Race/Ethnicity						
African-American	3,459	49.45	7.82	(49.19 – 49.71)	15.39	.000
Hispanic	1,124	49.65	6.85	(49.25 – 50.05)		
Caucasian	1,771	48.26	9.20	(47.83 – 48.69)		
Primary Drug						
Cocaine	1,278	51.26	7.11	(50.87 – 51.65)	68.98	.000
Opiates	1,432	50.26	6.12	(49.94 – 50.57)		
Crack	1,504	49.81	7.16	(49.45 – 50.17)		
Poly Drug	655	49.03	7.62	(48.45 – 49.61)		
Other Drug	348	48.39	8.60	(47.48 – 49.29)		
Marijuana	469	46.28	9.78	(45.39 – 47.16)		
Alcohol	642	44.72	10.73	(43.89 – 45.55)		
Age						
Under 24 Years	1,388	48.75	9.03	(48.27 – 49.22)	3.70	.011
25–34 Years	2,832	49.48	8.11	(49.18 – 49.78)		
35–44 Years	1,824	49.01	7.56	(48.66 – 49.38)		
45+ Years	479	48.55	7.31	(47.90 – 49.21)		
Legally Mandated to Treatment						
Yes	1,630	49.15	7.050	(48.81 – 49.50)	28.29	.000
No	2,924	50.30	6.970	(50.05 – 50.56)		

NOTES: (1) Two percent are missing data on race-ethnicity and primary drug. (2) Data on whether legally mandated to treatment is not available for clients in the referral program. Thus, 30% are missing information on whether legally mandated to treatment.

Table 2

Parameter Estimates for Multilevel Model Examining the Relationship Between Modality and Client Motivation and Readiness for Treatment (N=6,523)

Fixed Components	Estimate	SE	df	t	Sig.	95% Confidence Interval
Intercept	52.06	0.47	47	111.02	.000	(51.11 – 53.00)
Modality						
Referral Programs	-6.48	1.38	18	-4.70	.000	(-9.38 – -3.58)
Drug-free Outpatient Programs	-4.10	0.72	30	-6.03	.000	(-5.38 – -2.67)
Methadone Maintenance Programs	-2.35	0.72	30	-3.27	.003	(-3.82 – -.88)
Residential TC Programs (Reference Category)						
Type of Clientele Served						
Specialized Treatment Population	-2.18	0.58	31	-3.79	.001	(-3.35 – -1.01)
“STANDARD” Treatment Population (Reference Category)						
Variance of Random Components	Estimate	SE		Wald Z	Sig.	95% Confidence Interval
Program Variance (Intercept)	1.63	0.96		2.75	.006	(.80 – 3.33)
Residual	53.32	0.59		55.35	.000	(51.46 – 55.23)
-2 Log Likelihood	42089.03					

NOTE: (1) Specialized treatment clientele includes programs designed specifically for women, homeless persons, persons in the criminal justice system, and mentally ill clients. (2) Analysis controls for age at admission to treatment, gender, ethnicity, and primary drug of abuse. (3) Listwise deletion of missing data was used.